SEPTEMBER, 1964

AIRFIX magazine

FOR PLASTIC MODELLERS

MONTHLY 1/6

IN THIS ISSUE

J94 Saddle Tank: motorisation made easy

New BAC One-Eleven and MG 1100 kits

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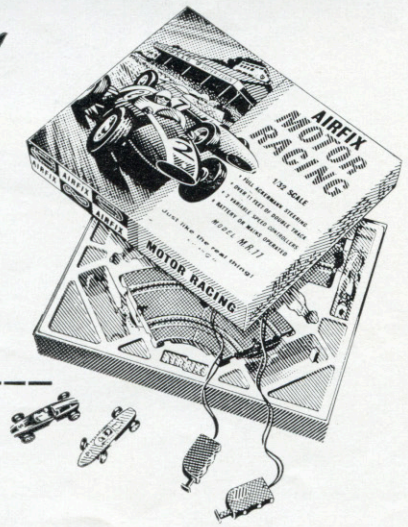

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AIRFIX magazine

FOR PLASTIC MODELLERS

Volume 6, Number 1 **September, 1964**

CONTENTS

COVER PICTURE

An Avro 748 of the Brazilian Air Force is seen flying high above a residential area of Brasilia, the country's new capital. 4,000 feet above sea level and 1,000 miles inland, Brasilia was the first of the air-age cities and had a two-mile long airstrip before it had any buildings!
(Illustration by courtesy of 'The 748 Journal'.)

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AIRFIX magazine is published on the fourth Wednesday of each month. Annual subscription rate 24s.
(Second Class postage paid at New York Post Office, NY.)

NEXT PUBLICATION DATE:
September 23, 1964

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Most recent addition to the 1:32 scale Airfix series of Modern Car kits is this MG 1100. It costs 2s and comprises 60 parts.

New BAC One-Eleven and MG 1100 kits

A fine replica of BAC's new short-haul jetliner, the One-Eleven, has now appeared in the Airfix 1:144 scale range. The kit has 50 parts and sells for 3s 6d.

NEWS FROM AIRFIX

The world's greatest value in construction kits

FURTHER additions to the Airfix civil aircraft and modern car kits ranges are announced this month. Latest to appear in the 1:144 scale airliner range is the BAC One-Eleven, priced at 3s 6d, while an MG 1100 joins its 'little sister', the Mini, in the 2s 1:32 scale Modern Cars series.

The 1:144 scale BAC One-Eleven joins Series A, priced at 3s 6d. Colourfully boxed, and including comprehensively illustrated assembly and painting instructions and a tube of polystyrene cement, the kit is moulded in light grey and transparent plastic and has a total of 50 parts, plus a two-part display stand.

Airfix Magazine

This finely detailed and easy-to-assemble model features revolving undercarriage wheels, a working ventral staircase and true-to-prototype tail-mounted jet engines. There are four separate hatches and doors that can be fitted in either the open or closed position. Moulding detail is good, especially on the wheels. An 11-item colour transfer sheet is provided, allowing the modeller to finish the aircraft in British United Airways livery. The result is a very smart little miniature, which has a wingspan of $7\frac{3}{8}$ inches and a length of $7\frac{7}{8}$ inches.

Designed to operate primarily over routes of up to 1,000 miles in length at speeds of 550 mph, the One-Eleven had orders from eight airlines before it was first flown on August 20, 1963. Equipped with self-starters and apparatus for ground cabin air-conditioning. the 'plane can operate from small airfields devoid of ground services. With a ventral stairway fitted as standard, and provision for powered steps at the front entrance, it is indeed one of the most independent of airliners.

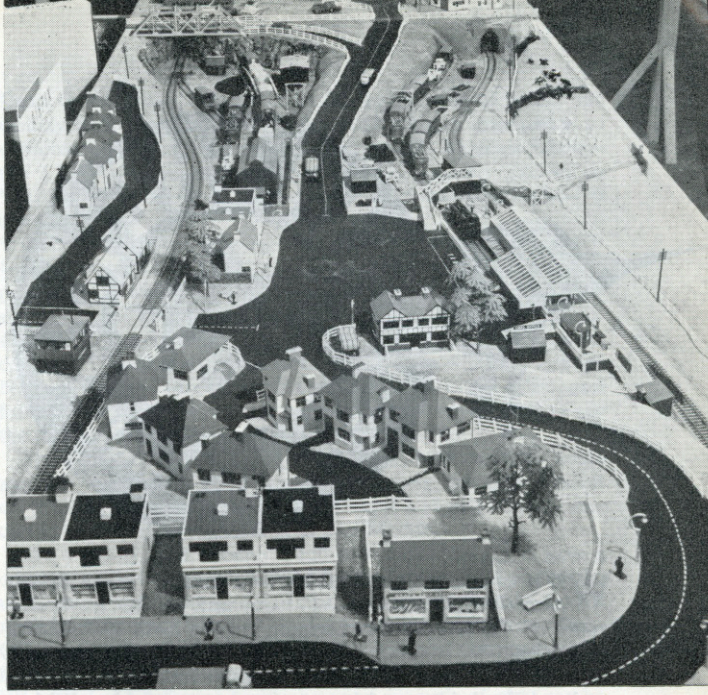
Three different versions are built, known as the Series 200, 300 and 400. All have the same dimensions and can carry 63 to 79 passengers, but the 300 and 400 have more powerful engines. The BAC One-Eleven Series 200 has a maximum cruising speed of 550 mph at a maximum payload range of 1,070 miles, and has a wingspan of 88 ft 6 in with a length of 92 ft 6 in.

1:32 SCALE MG 1100

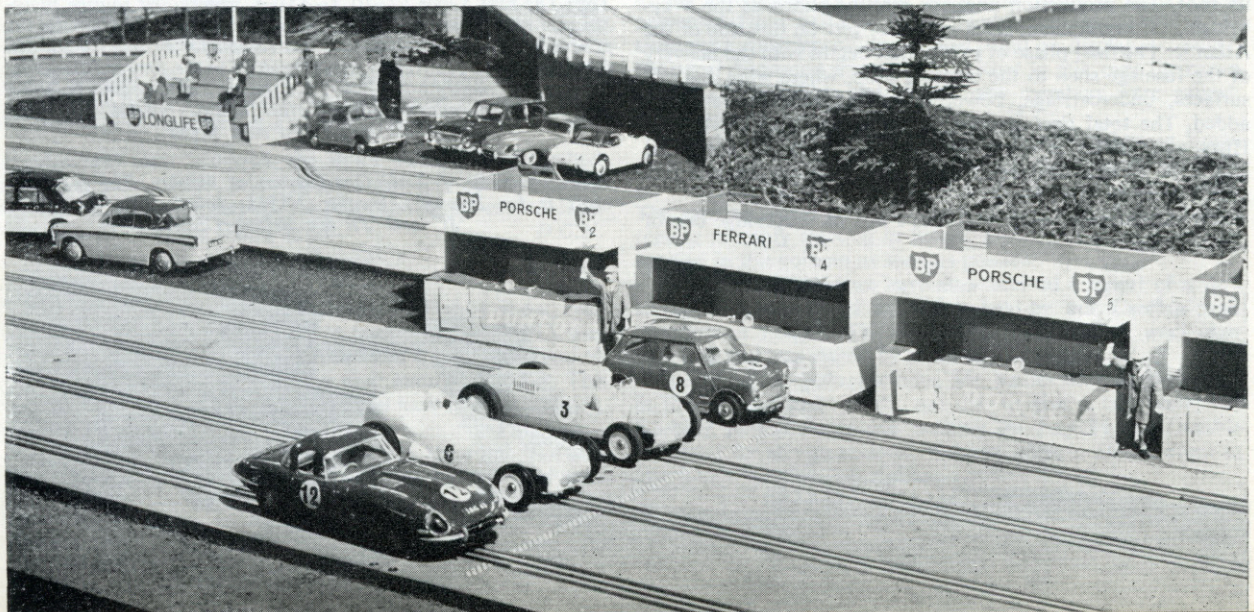
THE second of this month's releases, the MG 1100 kit comprises 60 ivory and transparent parts, and includes fully illustrated instructions, a painting guide and a choice of three different number plates. Making up very well into a handsome miniature, the MG is finely moulded and embodies a wealth of detail. The front suspension, drive and steering assemblies, in particular, are intricate pieces of work. The windows fit very well, while the transparent headlamp and tail-light assemblies carry a lot of moulded detail.

The undertray, interior and front radiator grille are particularly pleasing to the eye, and the minute 'MG' motifs on the hub caps are quite a work of art. With care, the wheels can be made to revolve freely, yet without wobble, and the car runs very well. The Moulton liquid suspension units are reproduced at the rear and add a final authentic touch of realism to an attractive little model that fully captures the 'character' of the prototype.

The MG 1100 is one of the most luxurious of the Issigonis-designed ADO 16 range of BMC saloons. It incorporates front-wheel drive from a transversely mounted engine, and the revolutionary Moulton Hydrolastic, fluid-operated, coupled suspension. This system eliminates conventional shock absorbers, the fluid providing the necessary damping medium. A very level ride is achieved, while ease of control and good handling qualities are provided by the all-round independent suspension and separate pitch and roll control bars. With the performance of a very willing twin-carburettor 1,100 cc engine, the MG is a sporty little saloon. As modelled by Airfix, it is $4\frac{1}{2}$ inches long and sells for 2s.



The two photographs on this page show **(above)** *the fine OO gauge model railway layout and* **(below)** 1:32 *scale slot circuit that were displayed on the Airfix stand at the recent Model Railway and Transport Hobby Show. The railway layout featured a wide selection of Airfix kits (including buildings, rolling stock, and other accessories) and incorporated a tank museum, trading estate and shopping centre. On the slot circuit could be found the full Airfix Motor Racing range, including the new grandstand and motorisation kits.* (*More on the Show on page* 27.)



WITH considerable national interest centred on the British Aircraft Corporation's VC-10, a visit to the Weybridge works of the company last month proved both topical and instructive.

Being at the centre of the BAC organisation, the old Vickers works at Weybridge, and its associated test airfield at Wisley, have what must be one of the largest centres of aircraft design, research, development and production in Europe.

Weybridge itself has a great many historic associations, as the works are based on what was the centre of the motor racing world before the war, namely the Brooklands circuit, parts of which are still in existence around the perimeter of the factory. Vickers first came to Brooklands in 1915, and established a small aircraft factory on the site of the now long forgotten Itala motor works.

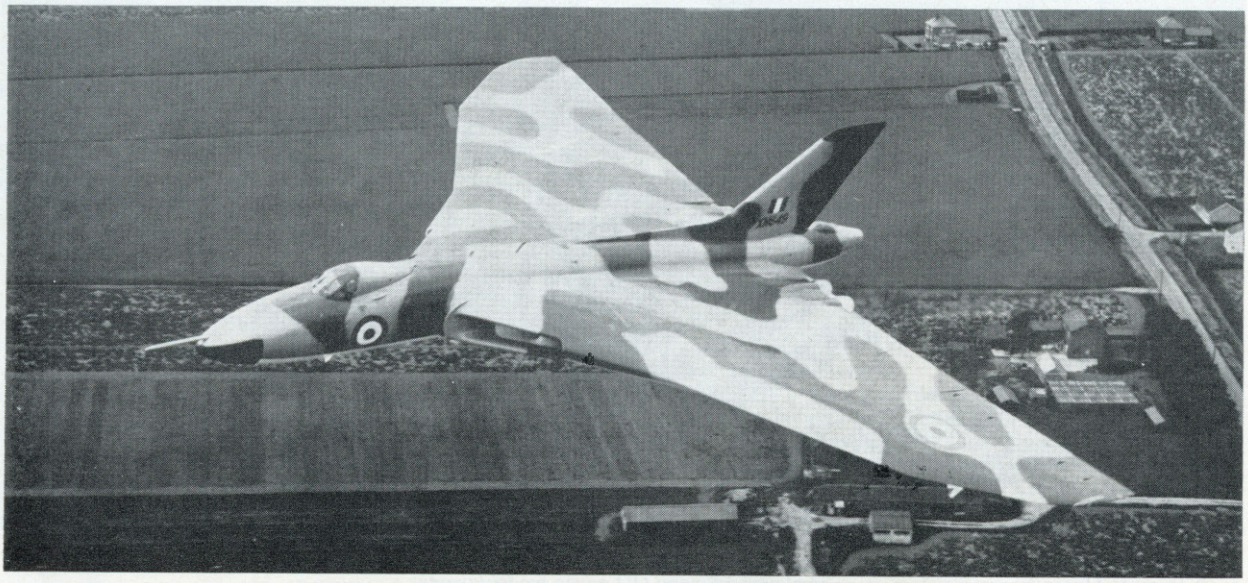
Many famous names and aircraft have passed through the doors of the factory and used the 3,800 ft runway to take-off for other larger test airfields, such as nearby Wisley. Both the Spitfire and Wellington made their first flights here, being the forerunners of some 20,000 of the former and 11,500 of the latter to be produced at Weybridge and other factories throughout the world. Other famous aircraft, such as the Viking, Viscount, Valiant, Swift, Scimitar and Vanguard, have all started life on the drawing boards at Vickers since the war.

The actual design office at Weybridge is one of the largest buildings of its kind in Europe. Over 1,000 people work under its roof. The production lines, or erecting shops as the Weybridge staff know them, are also the longest on this side of the Atlantic. The final phase of production begins with the delivery of the fuselage shell to the erecting shop, where wing and tail surfaces, undercarriage, power plant and other systems are added. The total *final* assembly space available at Weybridge, Hurn and Wisley is some 900,000 sq ft, and the combined length of all assembly lines at peak production exceeds one mile.

Among the many other facilities I saw at Weybridge one of

Top: *The first Super VC-10, G-ASGA, undergoing routine maintenance checks in the Wisley hangars.* **Centre:** *A VC-10 on the production line at Weybridge. This example for British United will feature an enlarged freight handling door in the forward fuselage.* **Bottom:** *A country house? No! It's the air traffic control building at Wisley, with radar aerials and other facilities partially hidden by a privet hedge and neat lawns.*

Below: *Line-up of BAC One-Elevens at Wisley. The first aircraft is for Braniff Airways, N1541, followed by G-ASJA, 'JC and 'JB for British United.*



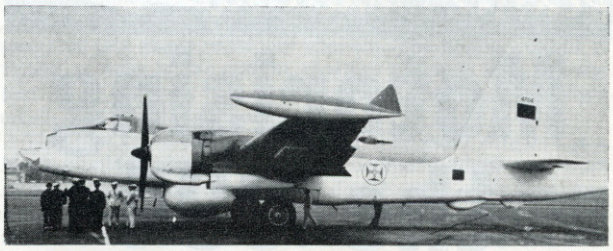
One of the first photographs to be released of the Vulcan B Mk 2 in grey and green camouflage. This one comes from RAF Coningsby, and it is interesting to note that the roundel appears on the port wing only. Serial number of this aircraft is XM649.

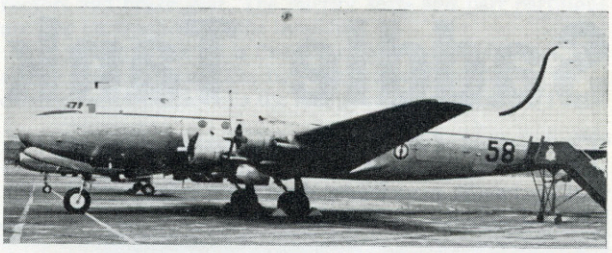
those which impressed me most was the Stratosphere Chamber. This is some 25 ft in diameter and 50 ft long, and is used to simulate such extremes of climatic conditions as wind, rain, blizzards and solar radiation, so that much of this work is eliminated in the test flying programme. It can take an aircraft up to a simulated height of 80,000 ft, and temperature can be varied from —65 degrees to at least +55 degrees Centigrade. Weybridge also boasts five wind tunnels, in which models far more complicated than you or I can possibly make are tested. These models cost up to £10,000 each and, using the tunnels, many of the problems involved in the tremendously complicated task of developing a complex modern aircraft are solved, within a speed range of up to Mach 3.5.

Situated some three miles to the south of Weybridge is the BAC test airfield of Wisley, with its 7,000 ft runway, adequate for most of the work required in the development flying of the company's products. Operated by the Vickers Division of the Corporation, Wisley has a complex system of air traffic control, as it lies close to the Heathrow and Gatwick areas and supervision of aircraft on test is therefore of the highest importance. Both Decca 424 approach radar and Decca MR100 area surveillance radar aids are available, making Wisley one of the best equipped privately owned airfields in the United Kingdom. The odd thing about this is the fact that the tower itself is housed in what appears at first glance to be a private house. The local airfield control is carried out from one of the upstairs bedrooms, and the radar and approach control rooms are situated close behind.

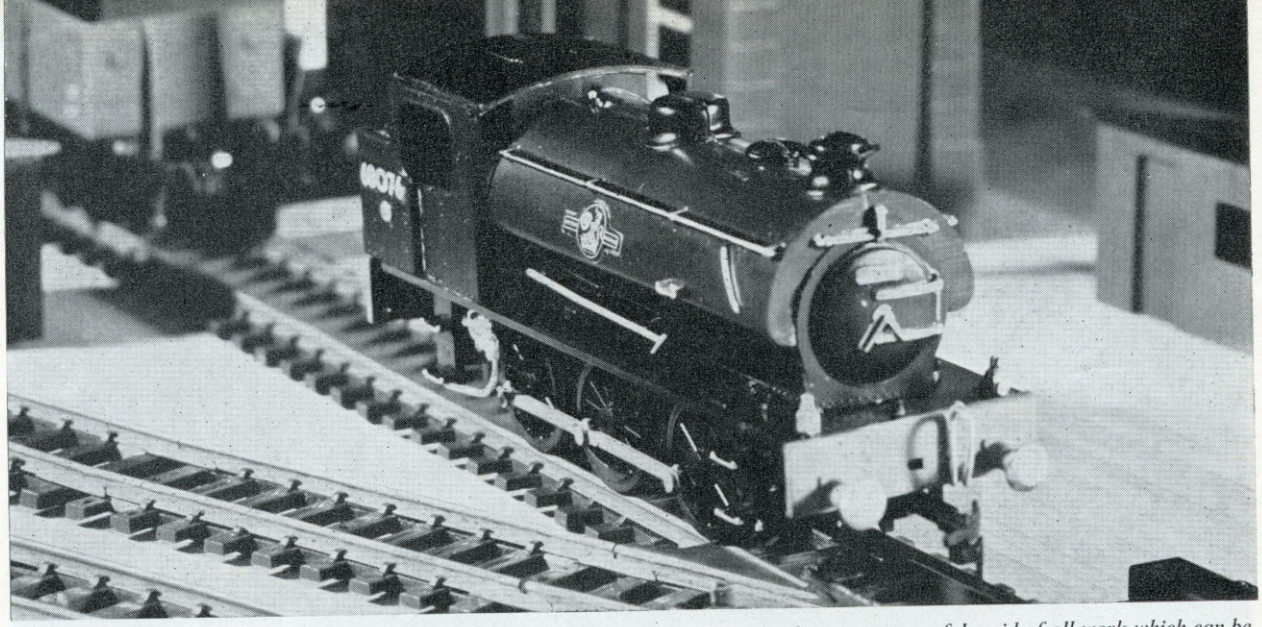
Another interesting factor about the facilities at Wisley is the test rig, in which airframes are subjected to rigorous vibration tests to determine the fail-safe life of all components. This occupies a large area in one of the hangars and, when I visited the airfield, contained the wings and fuselage of a VC-10.

My visit to Weybridge and Wisley was all too brief. The tremendous amount of money that must be tied up in the facilities available, and the thousands of people who work for the Corporation, brought home to me the need for very careful thought, on behalf of government and industry, to ensure that they are neither put out of employment nor the facilities so watered down as to be of little use in the maintenance of the prestige of British aircraft overseas.





Interesting visitors. **Top:** *Portuguese Air Force Neptune,* 0704, *and* **centre** *a French Navy C-54, seen at RAF Northolt on June* 25. (Photos R. L. Ward.) **Bottom:** *A B-58 Hustler,* 92434, *from the 305th Bomb Wing stationed at Bunker Hill AFB during a routine training visit to RAF Upper Heyford on July* 21.



The Airfix J94 0-6-0 Saddle Tank is easily motorised, as described this month. It results in a most useful maid-of-all-work which can be employed on many OO gauge model layouts.

Plastic Modelling — by Mike Bryant

Motorising the J94 Saddle Tank

THIS method of motorising the J94 is comparatively easy and, with reasonable care, can be tried by beginners. The resultant working loco is a useful maid-of-all-work for a good many layouts. I know that many modellers sniff at any description of a kit motorisation which does not start 'First build a brass chassis' —but this presupposes a fairish tool kit and an ability to work accurately in metal, neither of which a beginner can be expected to possess. Sooner or later, a lot of you will want to try metal chassis building, but until you have acquired some of the tools needed and more experience in the hobby, have a go at something like this motorisation. It will give you a kick to see it working and to know that you have built it yourself.

THE MAINFRAMES

The axle holes must first be bushed. I used the small brass bearing bushes which K's make to convert Tri-ang axle holes to the more usual $\frac{1}{8}$ inch diameter, which is standard for driving axles in scale OO. The Airfix axle holes do *not* need reaming at all and the bushes can be gently twisted in from the inside, until the fatter end of the bush is almost flush with the outside face of the frame. Clip the two frames together temporarily and line up the pairs of bushes in their holes by passing a driving axle through them.

We come now to the choice of motor and gears. If you are using the standard Tri-ang 004 motor, which already has the worm fixed, you will need a Tri-ang worm wheel, and this must be bushed with another K's bush to allow it to be soldered to the centre of one of the Romford driving axles. Alternately, you can use a K's motor, with or without a flywheel, with either Romford or K's gears, which are secured by set screws and therefore do not need soldering.

The way you determine the position of the chosen motor, and the correct cut-out in the mainframes to accommodate it, needs care. I take one mainframe and insert the centre axle with its worm wheel. I then bolt the motor to its mounting plate (more of that in a minute) and mesh the worm centrally with its worm wheel. Pivoting on this correct mesh, the best angle for the motor is determined, bearing in mind that the rear axle must be cleared. In this case I also wanted to leave intact the rear Airfix frame spacing peg for extra strength.

In general, it is best to seat the motor as low in the chassis as possible, so that you do not have any trouble with clearances at the top of the motor in the firebox or the cab. Once the best position is found, scribe on to the mainframe along the bottom of the motor mounting plate and mark the position of the projecting brass lug on the front bearing plate of the motor. A keyway at the front of the slot must be made to fit this lug. Scribe the second mainframe by carefully transferring the measurements by steel rule. Cut out the mechanism slot with a saw and adjust if necessary to get a perfect gear mesh.

The method of motor fixing varies with the type of motor you are using. For a Tri-ang mechanism, the motor mounting plate (A in sketch) is a strip of 0.4 plastic card, $\frac{1}{2}$ inch wide, to which the motor is bolted at the rear and which is cemented to the *top* of the V-shaped cut-out in the mainframes. K's motors, on the other hand, being only $\frac{3}{8}$ inches wide, fit *between* the frames, so the motor mounting plate in this instance is only $\frac{13}{32}$ inch wide and is cemented *between* the mainframes. These frames must, however, be cut to clear the armature which protrudes slightly beyond the pole pieces. If the motor mounting plate is not supported along its whole length by the mainframes, cement in plastic triangular fillets to give complete rigidity (B in sketch).

Similarly, two thick plastic spacers are glued between the frames at the front, one horizontally, one vertically (C in sketch); these will stiffen the chassis into a rigid unit in a way not possible were you to rely only on the Airfix peg spacers. Check that the front and rear axle bushes are still properly lined up by passing a driving axle or a piece of $\frac{1}{8}$ in diameter rod through them, and then run a little cement into the *plastic* axle holes against the brass bushes: this will effectively bond the bearing to the plastic. Mekpac is the best for this operation, applied with the point of a fine brush, but tube cement will do.

DRIVING WHEELS AND COUPLING RODS

I used Romford 18mm driving wheels—the usual method is three insulated and three plain—but if you want and can afford a luxury job, it is better to use all insulated wheels, as the nickel silver tyres do not collect dirt in the way the plain die-cast ones do. You will also need to make coupling rods, as the plastic ones supplied in the kit are too delicate for a powered loco. These can be made from nickel silver bullhead rail or strip with washers soldered on for the oil boxes. Use the plastic rods as a pattern for marking out.

The crank pins can be either 12 BA countersunk screws driven into tapped holes from the back of the wheels, or you can use Tri-ang OO shouldered coupling rod screws, again driven into tapped holes. If you use 12 BA screws from the back of the wheels, interpose a paper washer between the coupling rod and a small circle of copper wire soldered to the crank pin as a retaining washer. This stops everything getting soldered up solid and gives just the right amount of play in the coupling rod. I found a Peco fibre washer was needed between the wheels and the frame on both sides of the centre, driven axle, but the front and rear axles were allowed side play. This arrangement meant that all the driving wheels could be flanged and the loco could still negotiate quite tight curves.

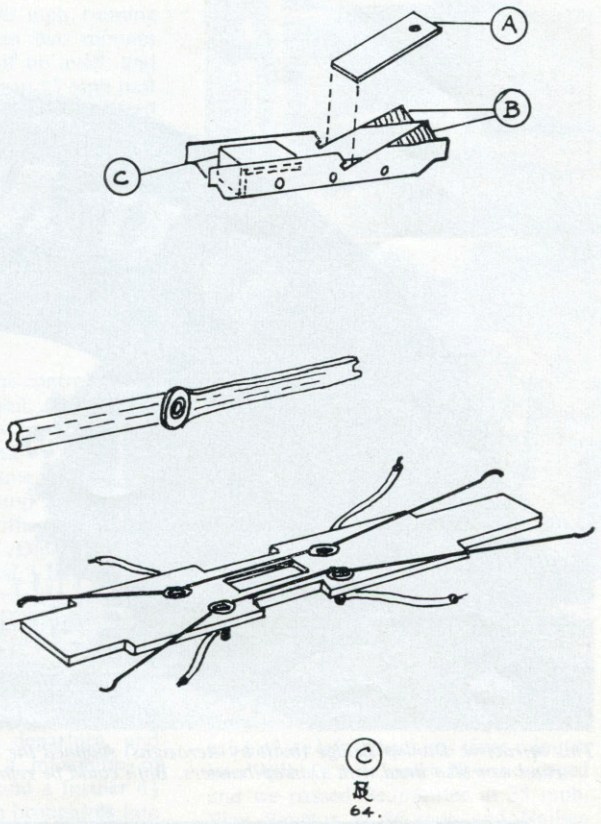
THE CURRENT COLLECTORS

These are made from fine phosphor bronze wire and bear against the backs of the flanges of the wheels. As this is a plastic chassis, it is best to collect from both insulated and uninsulated wheels, as otherwise the return current to the motor has to rely on passing back via a well lubricated worm and worm wheel. The collectors are mounted on a plate cemented *inside* the bottom of the mainframes. This plate has to be notched to clear the inside axle bosses and has a slot for the worm wheel. What the plate is made of depends on the method of fixing the collector wires. If you use thick plastic card, they can be clamped under washers on short 12 BA screws, with the motor leads screwed under similar washers on the upper side. If you solder to rivets or to 12 BA screw heads, well shellacked card or 1mm ply for the collector plate would be better. To complete the chassis, in my version I cemented the rear buffer beam to the mainframes and not to the body.

THE BODY

Part 13, the footplate, on which the body is built as a separate unit, has to be cut to clear the mechanism. The longest slot in the footplate, beneath the boiler, is extended back right to the rear and widened to clear the motor. I found it best to glue on the front buffer beam to the footplate so that, when the chassis is fitted and pushed right up to the front, you know that the body and the underframe are correctly lined up. Ensure that the mechanism slot is right and that the motor brushes and the armature are not fouled by the footplate at any point.

The boiler halves are cemented together and the whole of the bottom of the firebox is cut away. A $\frac{1}{2}$ inch U-shaped slot is cut



Top: *Main chassis modification details.* **Centre:** *Coupling rods from OO rail and washers.* **Bottom:** *Underneath view of the collectors and their mounting plate.*

in the underside of the boiler, directly in front of the firebox, to clear the worm. Frequent testing of the body on the chassis is necessary from now on. Another U-shaped slot has to be cut in the cab front plate; this roughly coincides with the arch of the backplate in the cab. A square cut-out in the cab back came up to the reverse bend in it. The safety valve unit can now be slid into place and cemented, and the cab built up. The bunker back stiffens up the weakened footplate very nicely. Leave off the cab roof at this stage. The brake standard has to be cemented into a new hole drilled nearer the cab side sheet, as the original locating hole will have been removed with the mechanism slot.

The remainder of the body parts can now be added, except for the smokebox front (part 23) which should be omitted until the loco has been weighted. The rear weight should be fixed first; some lead sheet or lead shot in Plasticine should be glued across the inside of the back of the bunker. Now, with the chassis in place, find out what weight is required inside the front of the boiler to balance the loco on a strip of wood under the centre driving wheels. Cement or plug this weight in position and then glue on the smokebox door and the cab roof.

Unfortunately, the postal strike and the ban on parcels has meant that it has been impossible to get photographs of this motorisation taken in time for this issue. I hope the drawings and the more detailed text will enable you to complete the job without too much difficulty. If you have any queries, write to me, c/o the Editor, and I will try to help—but *please* enclose a stamp for the reply.

This attractive Dunlop Bridge (built by Aerosigns) spanned the entrance road at Brands Hatch for the European Grand Prix, and the road was also lined with Dunlop banners. Both could be reproduced on a miniature layout, to add a colourful touch of realism.

Wheelspin

BY BERT LAMKIN

Easy ways to brighten a slot layout

THIS month, as a change from dealing with a particular constructional idea, I have prepared what I believe are usually called random jottings. I hope that these will give you some ideas for details that can be incorporated into miniature racing layouts.

My real-life motor racing activities on the full-size scene involve me in visiting a number of circuits. For the European Grand Prix I was resident (in a caravan! —Ed) in the paddock at Brands Hatch for the whole week. This enabled me to appreciate the colour that is introduced for the major meetings, and gave a clear indication how the miniature outfit can, with a little care, create the right atmosphere. For instance, Dunlop produced a half-tyre arch, spanning the entrance to the circuit (and illustrated this month), with banners lining the roads; these were red, blue, yellow and green. Both these features are relatively simple to reproduce, and occupy little space. Various odd corners were converted very effectively into flower plots. These could be created in miniature by using the Merit series of small plants, with the added advantage that they will not wilt.

Needless to say, flags were used to good purpose. Large ones were flying from white painted masts flanking the VIP enclosures—on a small track this could be the grandstand. Smaller flags of the competing countries were sited along the pits. Another feature for these special occasions is the presentation platform. At Brands this is part of the start line building, and it was covered with a striped awning, and also had two small flagstaffs. This particular building could, perhaps, be the subject of a future article. It is quite distinctive, and incorporates a four aspect clock, which in miniature could be a working one.

Colour in the paddock

At these major events, 'the trade', that is the firms catering for motor racing, are always well represented. These give added colour to the paddock, with brightly painted vehicles and their banners displayed aloft. The paddock is usually flanked by the transporters of the competitors, and these add more colour. The circuit itself sports a lot of additional posters, not all directly connected with the sport. So, a look through the appropriate journals will produce some miniatures.

To cater for the spectators, extra buildings, etc, appear, ranging from semi-permanent restaurants to marquees and tents. One can reproduce the canvas quite easily from cartridge paper, with

cotton for the guy lines. All the foregoing is based on the assumption that the reader's own layout is more or less permanent. As with model railways, I think that even a small mounted layout is better than umpteen parts littered all over the floor. So take a lead from full-size practice, and dress the outfit as gaily as its size will allow.

Prepare the programme of events, which would have the actual Grand Prix supported by races for touring and GT cars, and include a special feature, such as a demonstration run or a parade of vehicles. Then, when everything is set, and you have had a rehearsal, invite all your friends along for your own major event.

Easy motorisation

Airfix are now marketing motorisation kits for certain of their 1:32 scale modern car models, the first being for the Mini. I have recently assembled this kit, and found that it was possibly the quickest way ever of adding to one's stable. Replacing the 'mechanics' is as easy as with the standard GP car. The usual points about painting apply—deal with the interior first, and the driver before he is fixed. The finished car will always reflect the amount of care taken in the assembly. Although my own particular car has not raced yet, a practice session suggested quite a lively performer. Motorisation kits for the 'E' type Jaguar, Ford Zodiac and Sunbeam Rapier will follow shortly, which will enable Airfix slot racing fans to add still more variety to their layouts.

If you do have to keep your track in pieces, it is worthwhile cementing $\frac{3}{8}$ in wide strips of plastic card to the inside edges of the curves. This will prevent the inside rear wheel dropping off. Paint the projecting lip with alternate black and white stripes. On the mounted layout the width of the track should always be increased on the corners.

Two into one won't go

While on the subject of tracks, the Airfix cross-over can be used to equalise lane length on a two-slot circuit without building a fly-over. You will need two cross-overs. They also provide an extra hazard—the sight of two cars heading for the intersection is quite something!

The new grandstand kit will have found its way on to several miniature circuits by now. It will be noticed that access for the 'spectators' is in front. In view of this, make sure your unit is set back with a suitable barrier between it and the track. Safety of the public always plays a big part in motor racing.

If you are able to install pits, these also should be positioned away from the actual track edge. Ideally, place them the width of the circuit away. If this is not possible, then a space of at least one car's width should be allowed between pits and track. The pit road is usually defined by a yellow line, and competitors are not normally allowed to cross this line. The rear of the pits should be fenced if it is adjacent to public viewing areas. It is attention to these details that distinguishes the miniature from the toy.

Another feature often overlooked is the flag marshals' posts. These are placed at strategic points to guard bends and corners. They are all placed within sight of the next one on either side, taking hills and bends into account, and this will often mean inner and outer siting. The post itself is a form of protection, either concrete and straw bales or railway sleepers and bales, the more elaborate efforts providing some weather protection as well. In 1:32 scale the simple post can be made from a block of wood some 3 in $\times 1\frac{1}{2}$ in $\times 1\frac{1}{2}$ in, and the bales can be foam rubber $1\frac{1}{8}$ in $\times \frac{9}{16}$ in $\times \frac{9}{16}$ in.

Warning for drivers

In real racing the posts are manned by a number of marshals with specific jobs. The flag marshals are in pairs; one faces the oncoming traffic and carries a blue flag, the other faces down track and has a yellow flag. By means of waved and stationary yellows, a driver gets sufficient warning of an incident, not unlike the distant and home signals on railways. One can now get plastic figures to act as marshals, and reproducing the tiny flags should present no problem. Perhaps I should amplify the siting—one avoids the obvious escape line of the corner, so do not place the miniature post directly in the 'line of fire'. Incidentally, the posts are equipped with fire extinguishers, brooms, small tins of cement and a telephone, this latter usually in a suitable box. So you can easily make your own points look authentic.

Reverting to the paddock; although one can fit this in the odd corner, always cater for an access road, even if it is only represented by a gate in front of the backscene. The same goes for competing cars going on to the circuit. The usual practice is to have a marshalling enclosure between the paddock and the track. If yours is to be a good venue, as much attention should be given backstage as in front.

SUPER SOUVENIR

MOTOR racing enthusiasts who were unable to attend the RAC European Grand Prix at Brands Hatch in July, but would like to obtain a copy of the colourful official souvenir programme, may do so by writing to the Programme Office, Brands Hatch Circuit, Fawkham, Dartford, Kent, enclosing 3s 6d for each post free copy required.

The 80-page programme contains 70 full-colour photographs of cars and drivers and the editorial contents include a review, by Dennis Holmes of the *Daily Mail*, of the current GP formula; a detailed description of driving round Brands Hatch by World Champion Jim Clark; and a survey of current Formula 1 cars and their drivers. There are also two double-page full-colour spreads—of an aerial view of Brands Hatch and of Jim Clark. With the programme comes a copy of the new Castrol booklet on the history of the European Grand Prix.

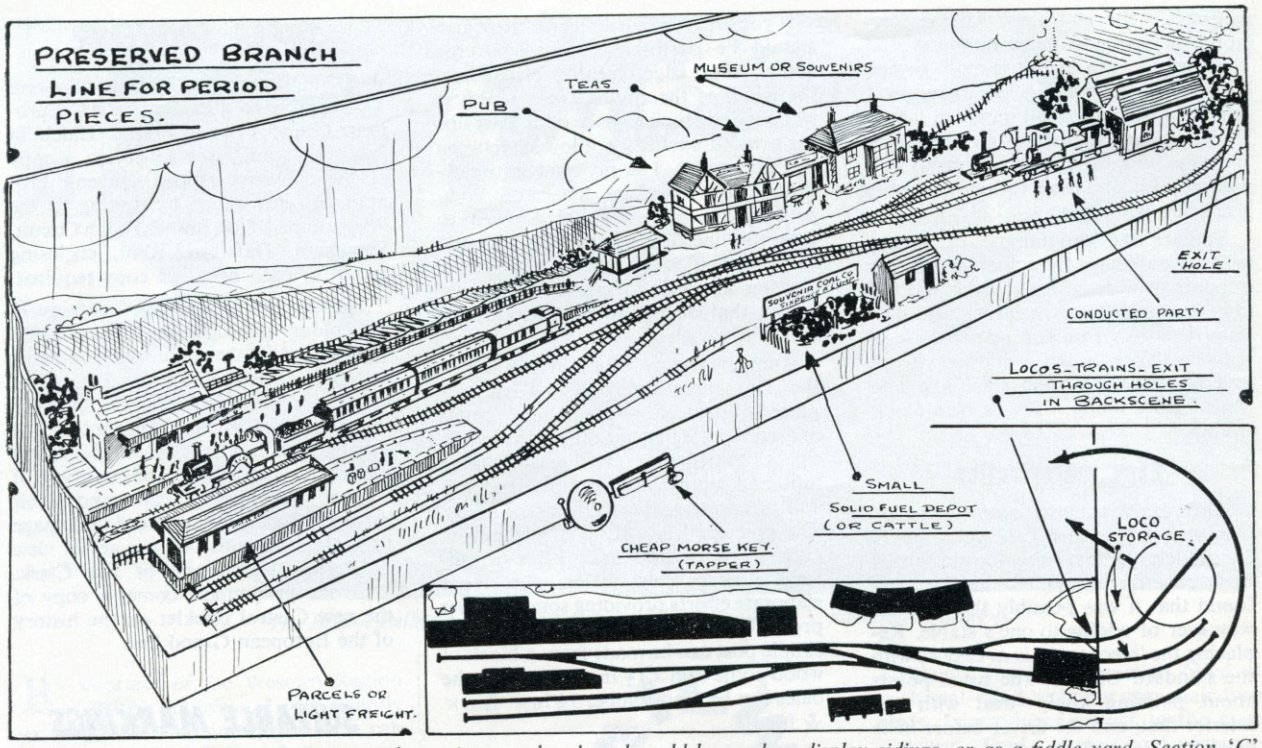
SUITABLE MARKINGS

MANY readers enquire about the sources of the markings seen on the models illustrating our regular 'Military Modelling' feature, so here for the record are some of the methods I use.

A very useful supply of letters and figures comes in the smaller sizes of the Letraset instant lettering range. Particularly suitable is sheet 194, just right for names and numbers, and available in black or white. For 7s 6d (UK) you get hundreds of individual characters, enough for a good many models. Letraset can be bought only from accredited stockists, and these include most big art supply shops. Plenty of alternative type faces and sizes are also available, and stockists have a sample chart which enables you to inspect the range for a size to suit your requirements.

Another source of numbers comes from the Airfix transfers supplied with each kit. Any unused numbers can be kept and cut into individual figures to produce an almost unlimited range of alternative numbers. Application is somewhat tedious by this method, but with careful alignment excellent results can be achieved.

Finally, white stars can be cut from small 1:72 scale US aircraft transfers, while formation signs, etc, can be reasonably well painted by hand, using a very fine brush.—*C. O. Ellis.*



Sketches show two stations but, as an alternative, one baseboard could be used as display sidings, or as a fiddle yard. Section 'C' would then only contain the curve.

LAYOUT REALISM

——by Alex Bowie

Go Bluebell

ONE of the more go-ahead model railway journals has been plugging the modernisation theme extensively, and this is a wise move. Let's face facts. The railway, as far as the average person is concerned, is a means of transport, and not something specially designed to please historically-minded people. If it is to live, it must not merely keep up with the times, it must also demonstrate that, for some conditions, it is superior to other forms of transport. At present, it is the most efficient means of bulk transportation. It could, if co-ordinated with other traffic, relieve road congestion, and in fact, far from being outmoded, is the real answer to modern problems in a tight little island.

But let's not stray too far from the essential fact that the railway, as a subject for modelling, is the same as any other popular form of transport, inasmuch as it includes ancient *and* modern.

Not having unlimited energy and time, I do not model cars, aircraft or ships. But I do take an interested spectator's view of all three of these hobbies. I notice that rickety old Sopwiths are modelled on an equal footing with ultra-modern supersonics, and that Jim Clark is just as popular as the late Sir Henry Segrave. And this, to me, is right.

No doubt the very vastness of a *modern* railway main line system introduces complications. But I am sure that, gradually, a formula will be found which will make it as popular as the more traditional lines. For the time being many modellers with limited space prefer to model the almost outmoded branch lines.

WHAT IS ACCURACY?

In the meantime, as the branch line recedes into history, details become more and more difficult to remember. Accuracy, which must rely on facts, becomes distorted into a matter of opinion. And the modeller is not helped by the unfortunate habit of some 'experts', who regard the hobby as a verbal battlefield on which facts are sometimes obliterated by the cannon smoke.

If, however, the modeller accepts the sane view, that 'history' is not without fables and half-truths, then he will be getting somewhere.

I say this deliberately, for the conscientious modeller has three courses open. Let's take the first two. Either he accepts full-blooded research, with its trials, tribulations and doubts, or he models an overall picture which, though even more disputable as to complete accuracy, is at least as convincing as most 'facts' of history. If he takes the latter course, he will be free to model far more rapidly, and in fact this course is the most suitable for the vast majority of people. They just haven't the time for the research, and often special building, needed for complete 'accuracy'.

Personally, I like 'accuracy', but having had a very

large scratch layout and volumes of data almost destroyed by unfortunate circumstances, I see no pleasure in building everything the hard way all over again. Thus it occurred to me to model a sort of Bluebell Line, which is the third alternative. The Bluebell is, of course, a preserved line.

I was naturally pleased to read that the magazine mentioned is advocating the same idea. Even raw beginners will know that a 'preserved' line is one which is preserved as much as possible in its original state, but which is run in the present age and is bound to introduce a few anachronisms, or departures from 'truth'. In other words, though the locomotives, rolling stock and station buildings may be old, it would be no anachronism if a Mini-Cooper appeared on the roads running beside it.

THE PERFECT PROTOTYPE

The Bluebell Line is the perfect modelling prototype because it supplies history without tears. Further, those who have visited it will have noted that some of the stock have received liveries which are exclusive to the Bluebell, or revive those which even many oldsters had forgotten.

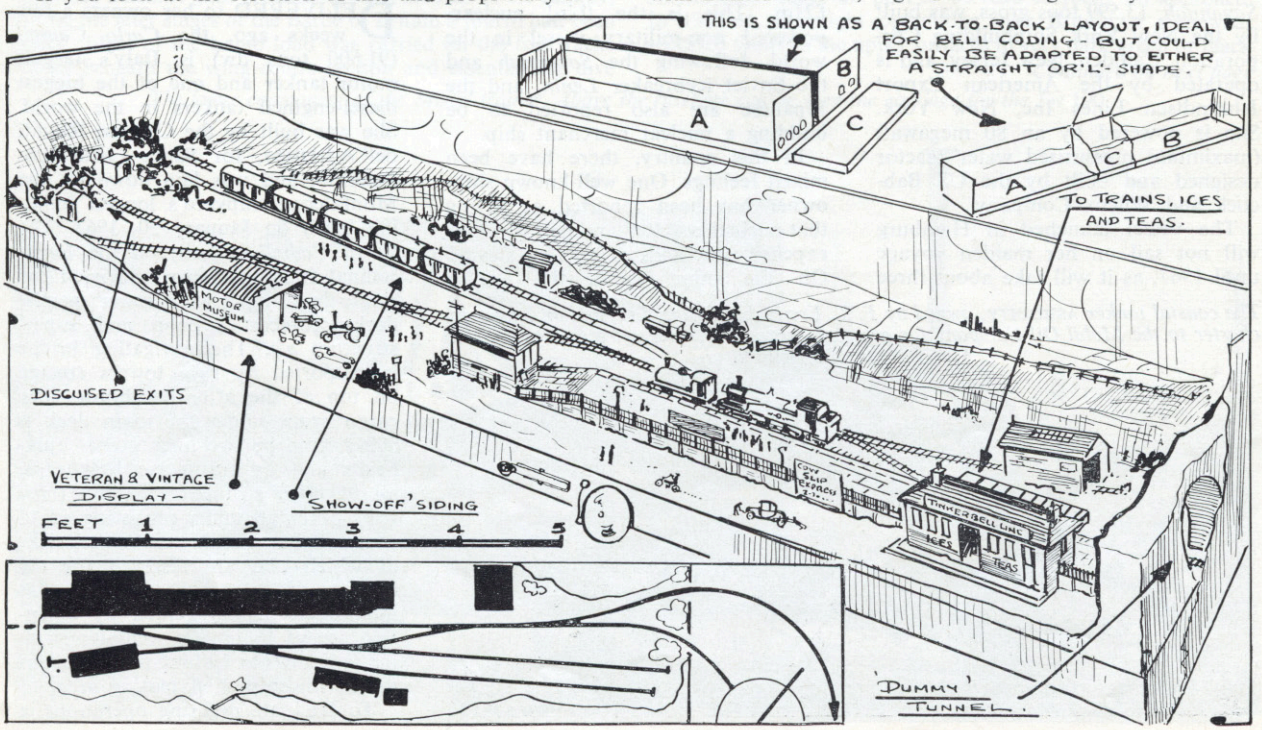
My own line—what there is of it so far—is called the Cowbell and, because licence is permissible, leaves me free to decide just how much I can afford to ignore the pedantries of the historian.

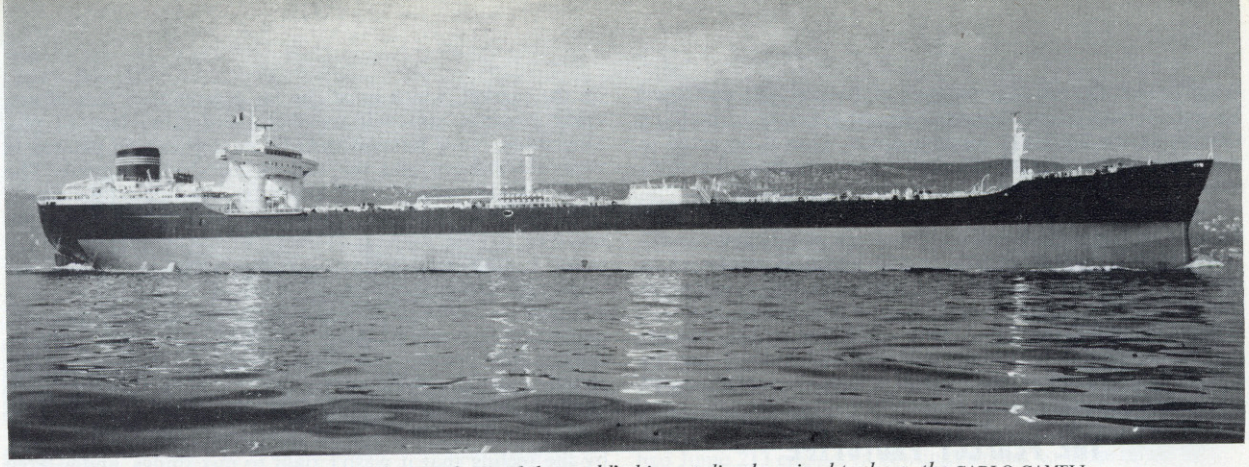
My line will use LNER stock of differing types, some of which were possibly never seen together in real life. But let's consider the average modeller's point of view. He will quite legitimately be able to run locos painted in the various liveries of both grouping and pre-grouping days. And if an occasional diesel railcar pops in from British Railways, nobody can grumble except those who do it from force of habit. The most important thing, though, is that for those without much spare time all the trappings of history are to be had for the asking in most model shops.

If you look at the selection of kits and proprietary locos on the market, which must be far greater than that of any other country, you will see that there is no lack of old-time locos. Your Kitmaster/Airfix models can be painted in their old colours, and the various metal kits likewise. The latter, though much more expensive, approach the plastic in fineness of moulding, and are almost as easy to put together *if cast properly*. I regret that two Great Eastern tanks I examined recently should never have passed the inspection department. As for rolling stock, the Tri-ang clerestory is easily adaptable to represent most old companies. A large percentage of the Airfix wagon and van kits, though BR, are the same as many in the old groups, but, in any case, no preserved line should refuse a little traffic from its big brother, British Railways.

This is splendid. Modellers have too often been held back by the feeling that it wasn't right to mix things, and a large number are often torn between one line and another, simply because they like the best features of all. Provided the mixing is done with common sense, the result should satisfy most people. It might even stop supporters of the various groups from beating each other over the head.

This month I have sketched a small layout which follows the theme, and allows either considerable storage facilities for a large collection of stock, or it can be used as a two-station system. Note that, as illustrated, stations or storage are out of sight of each other, and this allows for some authentic bell coding. The main point of this article, though, is to talk about the advantages of a 'new' form of modelling. (I put 'new' in quotes because, as with all things, it would be dangerous to be dogmatic about its originality.) There are in existence one or two private museum layouts, slightly different things—but we must give the builders credit for supplying, at least, the germ of the idea. And of course, unconsciously, clubs have been doing roughly this sort of thing for years, where long-scrapped locos rub shoulders with Bulleid Pacifics, a good time being had by all.





Italy's largest motor tanker, and one of the world's biggest diesel-engined tankers, the CARLO CAMELI.

SHIPPING NOTES

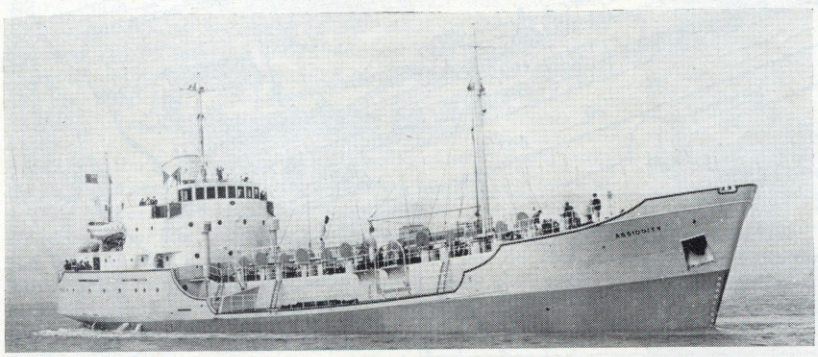
by A. J. Day

NUCLEAR propulsion of ships marks a new phase in the history of marine engineering. Human energy gave way to sail; sail to steam; steam to diesel. Will the steamer and the conventional motorship give way to nuclear propulsion? The capital cost may well be enormous, but the operating costs seem to be extremely worthy of investigation. These thoughts are brought about in the first place by the summer visit to Southampton of the world's first nuclear-powered passenger and cargo ship—the *Savannah*—and, secondly, by the launch at the German state-owned Kieler Howaldtswerke shipyard, in Hamburg, of Europe's first nuclear-powered cargo ship. The *Savannah*, 13,599 tons gross, was built by the New York Shipbuilding Corporation, Camden, New Jersey, and is operated by the American Export Isbrandtsen Lines Inc, New York. She is powered by an 80 megawatt (maximum) pressurised water reactor designed and built by the US Babcock and Wilcox Company.

The vessel launched in Hamburg will not sail on her maiden voyage until 1967, as it will take about three years to build and install the modern water-cooled atomic reactor to be made by two West German firms. The ship, which has a deadweight of 15,000 tons, is being built for the German Society for Using Nuclear Energy in Ship Construction and Shipping, and will cost about £4¾m. The reactor alone will cost some £2¾m. This is the third nuclear-powered non-military vessel in the world, following the *Savannah* and the Soviet icebreaker *Lenin*, and the Japanese are also reported to be building a nuclear merchant ship.

In this country, there have been mixed feelings. One well-known shipowner has been reported as saying that nuclear reactors are merely rather expensive methods of making steam! On the other hand, the British Nuclear Forum, which represents the industrial and commercial interests in atomic energy development, are most concerned that, as a leading shipbuilding nation, we are lagging behind in the construction and operation of nuclear ships.

The coastal tanker ASSIDUITY, *owned by F. T. Everard and Sons Ltd, and on long-term charter to the Mobil Oil Company for carrying cargoes of motor spirit and gas oils to Mobil's coastal terminals.*



Italy's largest motor tanker

DELIVERED to her owners a few weeks ago, the *Carlo Cameli* (91,600 tons dw) is Italy's largest motor tanker and one of the biggest diesel-engined tankers in the world. She was built by the Cantieri Riuniti dell'Adriatico, for Santa Lucia Spa, Palermo, and was laid down on the Monfalcone shipyard's longest building berth on January 30, 1963. The *Carlo Cameli* is built on the longitudinal framing system and is of the single-deck type with lower partial decks, forecastle, poop and superstructure aft. The navigating bridge is supported by twin towers erected on top of the after deckhouse. The cargo space under the main deck is sub-divided by two longitudinal bulkheads and by transverse bulkheads, all of plain surface type, into three rows of cargo tanks consisting of 13 centre and seven wing tanks each side, of which two are reserved for the carriage of water ballast. The hull is mainly electrically-welded by extensive use of automatic welding; riveting is limited to 10 longitudinal seams in the midship shell plating area.

To facilitate mooring operations, a

closed-circuit television system has been installed. The ship's propelling machinery, arranged aft, drives a four-bladed propeller of 6.6 metres in diameter. The main engine is a Fiat diesel type 9012 S capable of developing 25,200 bhp at about 122 rpm, though on bench tests it attained a maximum output of 32,500 bhp. It is a 12-cylinder unit, having a bore of 900 mm and stroke of 1,600 mm. The engine belongs to a large series of Fiat 900 S engines already built in the eight- and nine-cylinder versions.

LPG carrier

THE first vessel to be built in Europe for the transport at boiling temperature and atmospheric pressure of such gases as propane, butane and butadiene, as well as anhydrous ammonia and other chemicals, is the liquid petroleum gas carrier *Paul Endacott* (22,090 tons dw), constructed for Trelleborgs Angfartygs A/B, Trelleborg, by Kockums Mek Verkstads A/B, Malmö. The *Paul Endacott* is the only ship in the world capable of carrying four different grades of liquid gas as one cargo. Her hull is all-welded except for compulsory ABS crack arrestors, and she has a length oa of 592 ft 3½ in, a moulded breadth of 82 ft 0¼ in and a moulded depth of 48 ft 2¾ in.

As our physics student readers will be well aware, the liquefaction of gases may be effected in two different ways, either by cooling or by compression. In this very versatile ship both methods can be employed. The major portion of the cargo is carried in prismatic refrigerated containers in the ship's five holds, while wing spaces on deck are used as stowage for four cylindrical pressure vessels at ambient temperature. The *Paul Endacott* is powered by an eight-cylinder Kockum-MAN type KZ 78/140 D diesel rated at 10,350 bhp at 118 rpm, which gives the ship a speed of 16.7 knots.

Coastal tanker

A SMALL coastal tanker described soon after one of the world's largest diesel tankers is rather an anti-climax but, if my memory serves me right, this type of vessel has never made an appearance in these Shipping Notes. This situation can be amended by the inclusion this month of the coastal tanker *Assiduity* (1,448 tons dw) which has gone into service on long-term charter to the Mobil Oil Company, following the successful completion of trials in the Humber roads. Her name ending in *ity* will have already suggested to readers that she is owned by F. T. Everard and Sons Ltd. Her builders were the Goole Shipbuilding and Engineering Co Ltd. The *Assiduity's* first voyage was from Mobil's refinery at Coryton, Essex, to the company's terminal at Gunness, Lincs. It is intended that she will carry cargoes of motor spirit and gas oils to Mobil's coastal terminals. The tanker has a length bp of 218 ft, a breadth of 36 ft and a moulded depth of 15 ft. Her Newbury diesel engine develops an output of 1,125 bhp at 240 rpm.

Record RN launchings

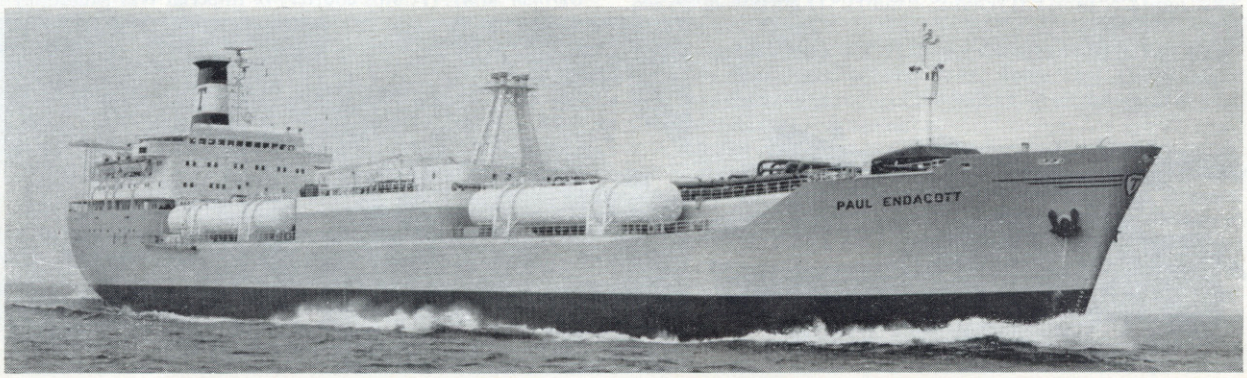
IN the course of three days at the beginning of July, four new ships were launched for the Royal Navy, the first time that so many had gone down the slipways in such a short period since the peak shipbuilding efforts of the Second World War. On the first day, the Leander-class frigate *Phoebe* was launched at the Linthouse, Glasgow, yard of Alexander Stephen and Sons Ltd. The following day saw two new guided missile destroyers put into the water: the *Glamorgan* at Vickers-Armstrongs (Shipbuilders) Ltd, Walker-on-Tyne, and the *Fife* in the Govan yard of the Fairfield Shipbuilding and Engineering Co Ltd. The fourth ship was the first of the new Fleet replenishment tankers, the *Olynthus,* launched by Hawthorn Leslie (Shipbuilders) Ltd, Hebburn-on-Tyne.

The second of the two assault ships building for the Royal Navy, HMS *Intrepid,* was launched at the end of June at the yard of John Brown and Co (Clydebank) Ltd. She has a standard displacement of 10,000 tons, is 520 ft long and has a beam of 80 ft.

On the same days as this launching, the second Polaris-armed nuclear submarine, the *Renown,* was laid down at the Birkenhead shipyard of Cammell Laird and Co (Shipbuilders and Engineers) Ltd. The keel-laying ceremony consisted of the positioning on the slipway of a prefabricated circular section of the submarine.

After conversion to survey ships, HMS *Mermaid* and HMS *Myrmidon* have commissioned for duty. They were formerly the coastal minesweepers *Sullington* and *Edderton.* Also following refit and conversion, the former landing ship HMS *Lofoten* has now commissioned as the Royal Navy's first helicopter support ship and joins the Home Fleet. Earlier, HMS *Opossum* had commissioned for service at the Cammell Laird Birkenhead yard. She is the eleventh of the Oberon-class submarines and the nineteenth of the Navy's new battery-powered hunter-killer submarines, developed from HMS *Porpoise* which entered service six years ago.

The liquid petroleum gas carrier PAUL ENDACOTT (22,090 *tons dw*), *the only vessel in the world capable of carrying four different grades of liquid gas as one cargo.*



Military modelling
by C. O. ELLIS

Part 1 — early types

Carrier conve

WITH the recent introduction of the Airfix kit containing a Universal Carrier, the modeller is given more than enough basic material for producing replicas of the entire Carrier family. Miniature army units will benefit greatly from this, for the Carrier was a truly ubiquitous vehicle, conceived in the first place as a specialised weapons carrier for infantry battalions, but later adapted for many more diverse rôles. Development is best illustrated by describing the modelling possibilities in more or less chronological order.

VICKERS MACHINE GUN CARRIER No 2

Designed as a replacement for the diminutive Carden Loyd series of carriers, the Vickers Carrier No 2 had a similar chassis to the Vickers light tanks, and entered service in 1937. It was produced in comparatively small numbers for the 'peace time' British army, though some remained in service long enough to be employed with the BEF in France in 1939-40.

Construction of the model is quite simple, the only modification to the chassis being the removal of the front dustguards at the point where they begin to curve downwards. Flat sloping dustguards are then fitted, together with mud flaps cut from paper. Template E gives the shape for these, and also shows the angle of slope. Next take the driving compartment bulkhead and reduce its height to the level of the ridge just above the seat backs. This is then cemented in place, together with the engine casing. For the driving compartment sides it is best to cut completely new parts, measuring 8mm × 4mm, from styrene sheet or scrap plastic, as this does away with the need to 'plug' the step locating holes in the parts supplied in the kit.

Frontal treatment is clear from the photographs—the original front plate is used, but the left hand half is replaced by a V-shaped gun shield measuring 5mm × 11mm. A Vickers m/g can be used from the 8th Army set or alternatively made from scrap. It is mounted on a tiny V-shaped wire gimbal, just visible in the photograph. A new front deck section is cut from paper to conceal the original gun-port locating hole, while a compartment for a third crew member is made by cementing card or styrene sheet bulkheads behind the gunner's position. This compartment should be 12mm long. Finally cut two 3mm square headlamps from scrap plastic and mount these on each side of the front plate. An ammunition box for the gun was usually propped on its side just behind the shield, though this is an optional fitting.

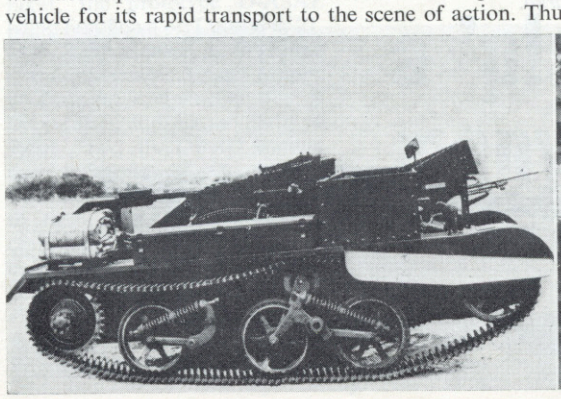
A typical vehicle was T 1839, which carried the 'T' one line higher than the number on each side, and also had the number CMM 995 front and rear on civilian style number-plates.

BREN GUN CARRIER No 2

The adoption of the Bren 1m/g as a platoon weapon in 1938 was accompanied by the introduction of a special carrier vehicle for its rapid transport to the scene of action. Thus the famous Bren Carrier came into being. In this model, the main features are the new mudflaps, the sloping engine casing and the compartment on the left-hand side for a third crew member. Template D and sketch A are given for these modifications, and it only remains to point out that a piece of styrene sheet is also required to make a sloping back for both this rear compartment and the engine. A stowage box, cut from plastic or stripwood, measuring 22mm long × 2mm square, is cemented to the right-hand side, while a battery box 5mm square × 4mm deep is required at the rear with a small strip of card representing the channel plating for the battery leads.

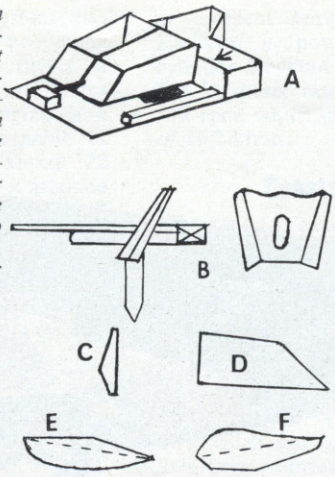
A Bren gun can be made from scrap or cut from an 8th Army figure. When doing this, cut deep into the figure's shoulder and then carefully cut away the plastic until the shape of the butt remains. The Boys .55 in anti-tank rifle was another Bren Carrier weapon and this is easily represented by a 15mm length of bristle.

A Bren Carrier of the London Irish Rifles in 1939 was numbered T 4901, and carried the number plates RMH 255, with the name 'Father O'Flynn' painted across the hull front. A BEF vehicle in France in 1940 was T 3716. It was camouflaged green and dark earth and had the 2nd Division formation sign—white crossed keys on a black square—on the left-hand dustguards front and rear, with the red infantry flash and the serial number 15 on the right-hand side. An 8th Army example would be T 2914 of the 4th Indian Division. This was finished



Early Carrier types showing (left to right) *the Bren Carrier; Scout Carrier with AA-mounted Bren gun; Universal Carrier Mk 1 with armoured roof and Boys anti-tank rifle; captured Universal Carrier fitted with 3.7cm Pak and ammunition locker for German Army.* (Photos courtesy of Imperial War Museum.)

Key to drawings: A—*sketch showing Bren Carrier superstructure arrangement. Cut down bulkhead where indicated by small arrow.* B—*full-size drawing for 3.7cm Pak.* C—*template for centre strut of roofed Carrier.* D—*template for Bren Carrier rear compartment side and shape of engine casing.* E—*mudflap for Vickers M/G Carrier.* F—*mudflap for Bren Carrier and Universal Carrier Mk 1. Score and bend at dotted line. All templates full-size.*



ersions

in sand with very dark grey (almost black) shading. The divisional formation sign was a red eagle on a black square, while the serial number 101 was carried on the square red infantry flash. The name 'Sultan' was painted across the sloping hull front.

SCOUT CARRIER

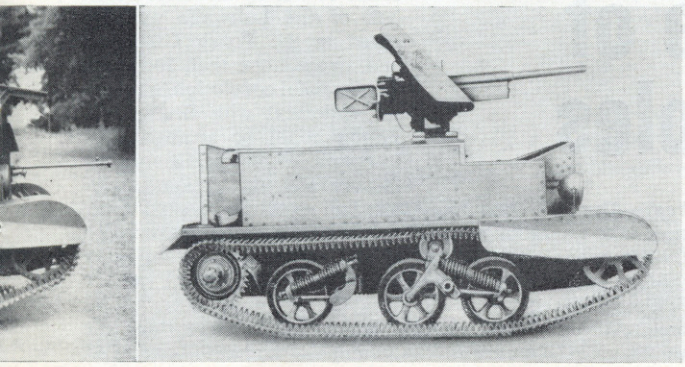
Representing the 'link' between the original Bren Carrier and the Universal Carrier, or later version of the Bren Carrier, sometimes known as the Scout Carrier, gave extra accommodation for a fourth crew member in the rear compartment, which in this vehicle was on the right behind the driver. Thus the model can be constructed using the right-hand side piece from the kit and the engine casing without alteration. On the left-hand side the long stowage box is fitted, while the battery box goes immediately behind the engine casing.

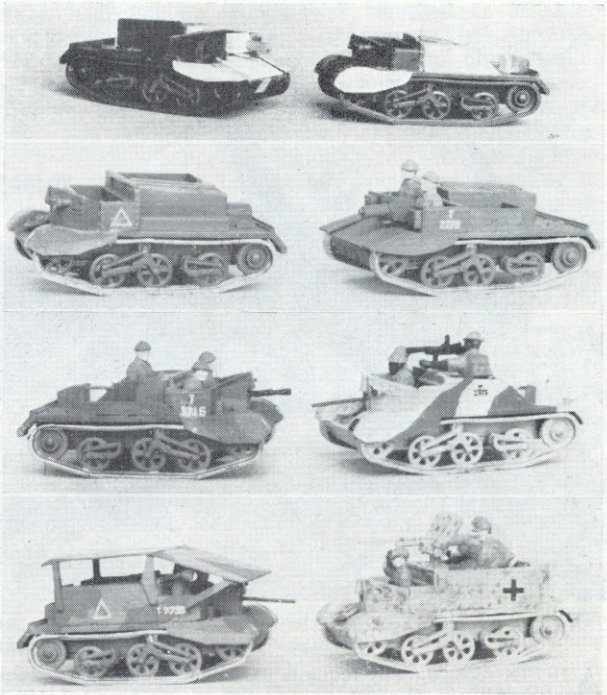
A typical vehicle, operated in 1940 by a Territorial battalion of the Gloucester Regiment, carried the registration number RMV 39 with 'A' squadron markings on the right-hand dust-guards. On the left-hand side it had the serial number 41 inside the red infantry square. An 8th Army vehicle was T 4023 of the 5th Indian Division. This was painted sand with the divisional sign—a red disc on a black square—on the left, and the red infantry sign with the serial 4 on the right.

Scout Carriers were also used as OP or Command vehicles, in which rôles they carried radio equipment in the rear half of the crew compartment, with a radio aerial at the outer corner.

UNIVERSAL CARRIER Mk 1

The main visible difference between the Universal Carrier Mk 1, introduced in 1940, and the later Mk II as supplied in the





Top to bottom: *Models of the Vickers M/G Carrier and Bren Carrier under construction, showing the styrene sheet and paper modifications required (note number plate on Vickers Carrier); completed models of a Vickers Machine Gun Carrier* (right) *and a Scout Carrier; a BEF Bren Carrier and 8th Army Bren Carrier with AA-mounted Bren gun and Boys anti-tank rifle (Indian crew adapted from the Airfix 8th Army set); a Universal Carrier Mk 1 with roof and a German vehicle with 3.7cm anti-tank gun. Note that the slots for the steps on the latter two models have been 'plugged' with scrap plastic.*

Airfix kit, lies in the shape of the mudflaps and the absence of steps on the earlier vehicle.

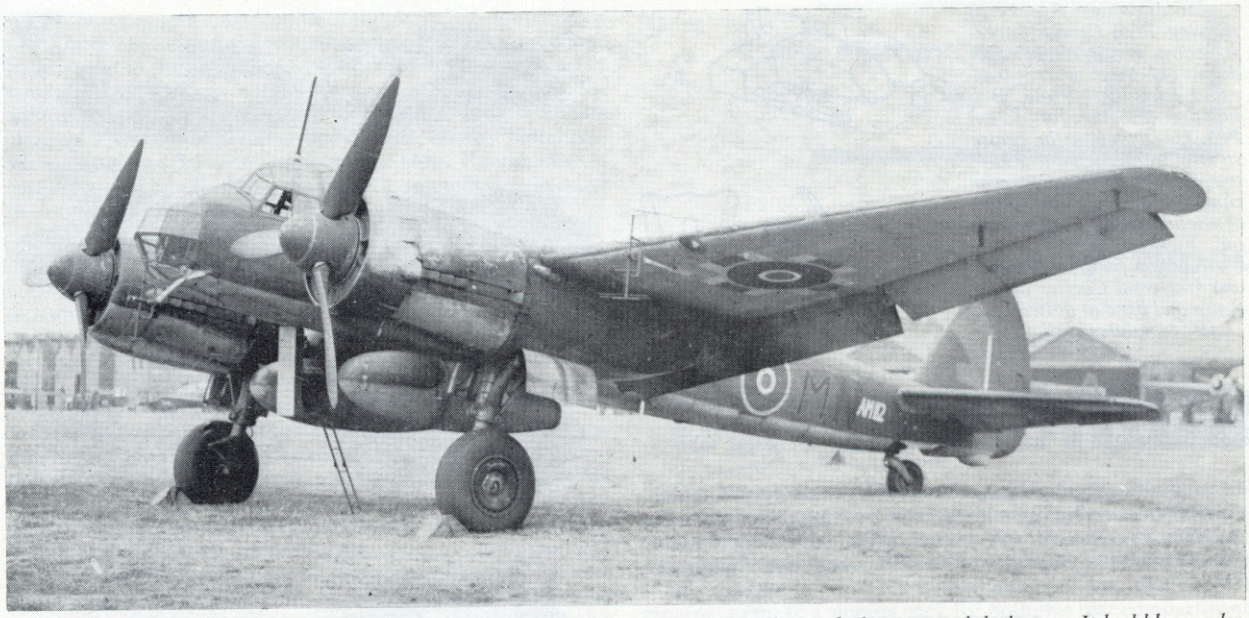
These differences are easily effected on the model, but an interesting variation worth making is the vehicle with the bullet-proof roof, illustrated in the photographs. This was a local modification carried out on a number of Carriers during the invasion scare in 1940—the object, of course, being to render the crew immune from the low-level strafing attacks by aircraft which had been so effective during the *blitzkrieg* in Europe.

Supports for the roof can be made from scrap plastic, adjusted to a height of 5 mm. The roof itself is best cut in three pieces, measuring (1) 21mm × 2mm, (2) 21mm × 21mm, and (3) 21mm × 18mm.

The vehicle shown is T 7755 of a Gloucester Regt Territorial battalion, then organised as an RAC Recce Regt. Other markings were the same as those of the Scout Carrier described above, which was in the same squadron.

A number of Universal Carriers captured at Dunkirk or in the Western Desert were put back into service by the Germans mounting the obsolescent 3.7 cm anti-tank gun. One of these makes an interesting conversion, the gun being made as shown in diagram B, using a pin for the gun-barrel and the 6 pdr shield suitably cut down. A piece of cocktail stick serves as a pivot, with a hole drilled through the engine casing which should have a piece of scrap plastic cemented above it as a strengthening pad.

A large ammunition locker at the back completes this model, while a crew is easily adapted from the Afrika Corps set.



This captured Ju 88A carries extensive radar, has no gondola and was camouflaged very dark green and dark grey. It had blue undersurfaces. She underwent trials at Farnborough and Gosport.

PROFILE

The Ju 88—a 'plane of many roles

AIRFIX receive many requests for additions to their model aircraft range, but none has more frequently been suggested than the Ju 88. This was not unexpected, for this aeroplane formed the backbone of the Luftwaffe for much of the war period, serving as bomber, fighter, reconnaissance aircraft, maritime attack aeroplane, dive bomber, trainer and in a variety of specialised roles. From it virtually stemmed the Ju 188 of the mid and later war years, and continuing the line came the Ju 388 and the contemplated 488. The total of possible conversions to which the basic Airfix kit can lead is far too numerous to fully cover here, but parts of the kit may be incorporated in almost any derivative. Little wonder, then, that so many model makers have requested it.

The Junkers Ju 88 was designed as a high-speed bomber, work upon which commenced not long after Hitler took control in Germany. During 1936 the aircraft passed from design stage to first flight, the prototype D-ASAZ being first flown on December 21, 1936. This machine, Ju 88V1, had a smooth nose contour, canopy roof almost level with the top of the fuselage and, like so many to follow, had its DB600 engines surrounded by oil and coolant radiators, giving it the appearance of being a radial powered aircraft. The third machine was the first to have 12-cylinder liquid-cooled Jumo 211 engines, which powered many of the production aircraft, and featured the annular cowling of the prototype. Additionally, it had a raised cockpit enclosure as fitted to later machines, but it was on the fourth that the peculiar arrangement of flat panels on the nose first appeared. Provision was also made for a crew of four; previously this had numbered three. Beneath its nose the fourth 88 had a long ventral cupola to accommodate a prone gunner. On account of its high performance, the fifth Ju 88, fitted with a pointed nose, established a number of weight and speed records in the spring of 1938. The Ju 88V6 was the first of the series to have single undercarriage legs which turned through 90 degrees on retraction, to lie flat in the rear of the nacelles.

The first ten production aircraft came off the lines in 1939, and were designated Ju 88A-O. Similar to the Ju 88V4, they had in addition dive brakes beneath each wing, following the fetish the High Command had for making its bombers useful for ground support and attacks on shipping as well as for more conventional forms of attack.

The Ju 88A-1 with Jumo 211Bs was the first standard production type, close on 1,500 of which had been built by the end of 1940, by which time the weaknesses of the aircraft were apparent as a result of operational service. At the outbreak of war in the West about half of the Luftwaffe was engaged in the Polish Campaign and, in the hope that, following its successful conclusion, a peaceful settlement with Britain and France could be arranged, the Luftwaffe made no immediate assault and the 'phoney war' began. During 1939 the Luftwaffe had established a small force trained to attack shipping in port or at sea, and equipped with the He 111s of KG 26, and by the outbreak of war having a mixture of Ju 88A-0s and Ju 88A-1s in KG 30, which was the first unit to be equipped with them. The anti-shipping operations first revolved around attacks on trawlers and Trinity House vessels, and there were attacks on ships in the North Sea and off

Scotland. In March, 1940, KG 30 figured in the well-known attack on the Fleet at Scapa, and was active a few weeks later in the battle for Norway. The 88s wore standard Luftwaffe 'splinter camouflage' of mittelgrün Nr 72 and dunkelgrün Nr 73, and had hellblau Nr 65 on their undersurfaces. They carried the black coding 4D ahead of the cross on the port side and aft on the starboard in standard positioning, followed by the aircraft's individual letter after which was painted H, K or L, these two appearing on the other side of the Balkenkreuz.

BATTLE OF BRITAIN

During the Battle of Britain the Ju 88 became an increasingly common sight over Britain, among the more numerous Dorniers and Heinkels. By now KG 30 was operating as part of the force bombing land targets, and had been joined by KG 76 coded F1 and KG 77 (3Z) in Luftflotte 2, where 88s were already in use as long range reconnaissance aircraft with F 122. Luftflotte 3 had its quota of bombers in LG 1(L1), KG 51(9K), KG 54(B3), KG 806 and in the reconnaissance Groups F 120, 121 and 123. Stories of the attacks by the 88s during the Battle are legion, but that on August 15 by some 50 Ju 88s of KG 30 operating from Denmark highlighted a weakness yet to be overcome with the aircraft. Unescorted, the bombers headed for the Yorkshire coast, where they were met by Hurricanes and Spitfires, which in the ensuing battle shot down eight of the enemy without loss. Poor armour and armament rendered the 88s helpless.

The arrival of a number of intact specimens of the Ju 88 now afforded the British a close-up view of the bomber. Most of those shot down could be seen to wear the splinter and blue finish, but odd specimens with dark green, almost black, uppersurfaces were recorded. During the winter of 1940 a matt black wash was applied to the undersurfaces of the 88s participating in the night blitz. One's first impression of the Ju 88 after climbing aboard was of extremely cramped quarters, the four crew members sitting almost literally with shoulders touching. Early 88A-1s had three machine guns protruding from the rear of the canopy, but by the later stages of the Battle of Britain a fourth had been added. Most of the bomb load was carried on the four racks placed beneath the wing centre section and essential for dive bombing, the cells in the fuselage immediately aft of the cockpit being used to house extra fuel tanks. On the 88A-1s lines were painted on the cockpit canopy sides to enable the pilot to take up the required dive angles—usually 40 degrees—and an automatic pull out came into operation after bomb release.

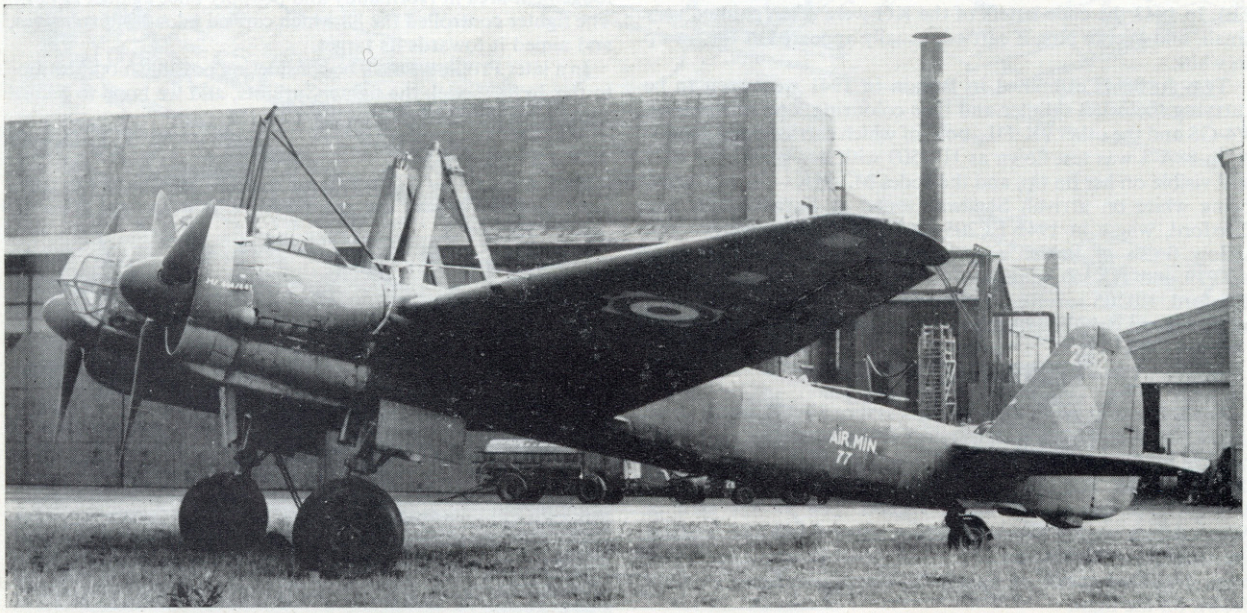
The version chosen for the Airfix kit came into production late in 1940, its major difference being the increase in wing span from 59 ft 10 in to 65 ft 10½ in. On this type, the Ju 88A-4, the armament usually comprised four guns in the cockpit and one firing downwards. Crew armour was much increased, and the undercarriage strengthened to permit heavier loads. At first the new variant had Jumo 211B engines, but its derivative Ju 88A-4/R had Jumo 211Js which featured a 'tray' beneath the nacelles as well as increased loaded weight and bomb load and a reduction in speed for the greater power available. The Ju 88A-4 had a top speed of 276 mph at 16,000 feet, a range of 960 miles at 220 mph, service ceiling of 26,700 feet, had an initial climb rate of 1,190 feet per minute and, loaded, weighed 24,350 lb.

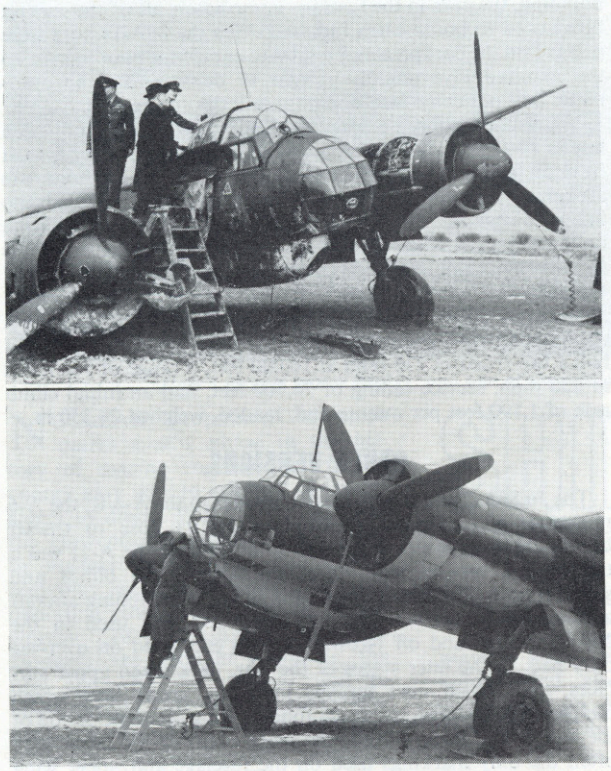
OTHER VERSIONS

The Ju 88A-5 and 6 were models similar to the A-4/R, the A-6 mounting a fender-like contraption on its nose to thwart barrage balloon cables, but it saw little service. The A-11 was a tropicalised version with water containers, sun blinds and survival gear. The 88A-14 was used as an anti-shipping aircraft and the A-17 carried two torpedoes and was used in the Mediterranean and off Norway. Ju 88s employed on over-sea duty had, in the later stages of the war, dark green upper surfaces, over which were sprayed light blue snaky lines which merged in places with the under tone. During the same period of the war, white lines without the black areas of the cross were often the only markings used on the fuselage and upper wing surfaces. Where the aircraft carried black letters beneath the wings, these usually comprised the first letter aft of the cross on the port side painted beneath the starboard wing tip, and the second letter under the port to be read correctly on approach. In 1943-44, for night operations over Britain, a somewhat speckled finish to the upper surfaces in very dark green or black

Continued on next page

The lower component of the Mistel trainer. Above the fuselage can be seen the carriage for the Fw 190.





Two views of Ju 88A-4s brought down in Britain. The top illustration is of a night raider, some of whose black wash has come off her undersurfaces. The lower illustration is of HM509, and shows some points of detail useful for a model. Note the absence of engine trays.

PROFILE—*Continued*

and light grey or blue with black undersurfaces was usual, the latter being easily washed off as on the aircraft of KG 6 (coded 3E). In 1943 the code letters of the KG were often painted very small, and Werke Nrs, if carried, usually appeared at the fin tip in white.

Two Ju 88-4s examined in Britain in 1941 were seen to be carrying the usual splinter and blue colouring, one being coded V4-GS and the other 9K:HL, both of which carried black letters. A Ju 88A-4 was test flown as HM509 with her Werke Nr 6073 still visible on her fin tip, and the codes M2-MK—the second M being white on arrival. She was tested at Farnborough and Duxford, where in 1941 EE205 in the usual brown-green and yellow finish of British experimental aircraft was also seen. AX919 and HX360 were also Ju 88s tested by the AFDU at Duxford. EE205 survived until 1944, and was a frequent sight as she toured Britain with the circus of captured enemy aircraft.

RECONNAISSANCE ROLE

Ju 88s in the D series were reconnaissance aircraft based upon the Ju 88A-4 and fitted with cameras in the bomb bay. They had no dive brakes but provision for long-range tanks was made on the wing racks. The D-2 was a similar version based on the A-5 and the D-3 was a tropicalised version. The Ju 88s used in North Africa wore a two-tone brown upper finish and retained the usual blue undersides and black code letters. The brown areas consisted either of stripes or a speckled finish of dark brown on the light.

Another specialised Ju 88 variant was the 88P, mounting a heavy calibre gun at the base of the nose for anti-tank operations on the Russian front and occasionally used against the US 8th AAF bombers on their day raids on Germany. These aircraft were A-4s converted.

Our attention must now be directed to Ju 88s which, if attempted as models, are going to call for increasing amounts of skill. The most straightforward of them would be the Ju 88S, which had a more streamlined nose similar in shape to that of the first prototype. Its principal difference lay in its BMW 801 engines, as fitted to the Do 217E, available in the Airfix range. An engineless 217 need not be a useless liability, for it could be the subject for a version of that aircraft with in-line engines. No under gondola was fitted to the 88S, and the nose guns were removed. The Ju 88S-2 had a large, deep bomb bay, and the S-3 had Jumo 213 engines in cowlings similar to those of the 88A.

Another major design feature which could, with considerable skill and care, be incorporated would be the nose of revised bulbous shape as fitted to the Ju 88B. This version had a large oval-shaped transparent nose affording an increase in the glazed area. The easiest method of building such a model would be to re-cast the nose entirely from transparent plastic. Alan Hall's useful suggestion in the August issue offers one solution to the problem, but as he points out practice is required. Only ten Ju 88Bs were built but, once the conversion has been mastered, the next stage, the building of a Ju 188, becomes straightforward. If you attempt this, you will need to make an entirely new tail unit, and the wings will need drastic revision! You will, in fact, look to your Ju 88 kit for oddments for the 188.

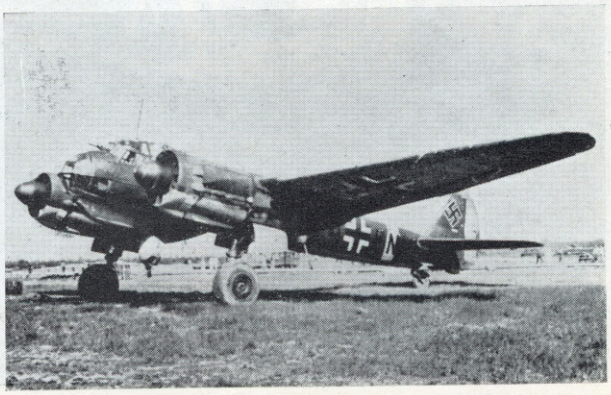
COMPOSITE AIRCRAFT

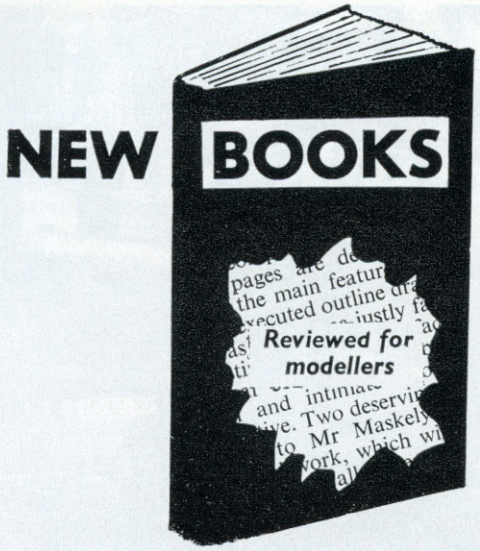
A much easier and very attractive model to build would be one of the Mistel combinations, the lower half of which is depicted in one of the photographs, in this instance of a Ju 88A modified to Ju 88H, which was shown at the 1945 RAE exhibition with an Fw 190A-8 above it. Many types of composite aircraft were considered in Germany during the war, but the only operational types were the Fw 190A/Ju 88G-10 (this type had a tail unit as fitted to the 188 and a blocked-in nose) and the Me 109G/Ju 88 combination, which was used against the Allied lodgement area in Normandy and possibly once against Britain. The fighter controlled the 88 which carried a load of explosives, and aimed it towards its target.

In a later Profile we shall be considering possible modifications to the Ju 88 model, the fighter variants, and we hope to record some experiences when making a Ju 188.

M. J. F. Bowyer

Ju 88A-4 V4-KN of KG 1 wearing standard markings. The white band partially around the rear fuselage is a tactical marking.





THREE MORE FOR RAILWAY MODELLERS

Useful for modellers

THE LYNTON AND BARNSTAPLE RAILWAY, *by G. A. Brown, J. D. C. A. Prideaux and H. G. Radcliffe. Published by David & Charles (Publishers) Ltd, 39 Strand, Dawlish, Devon, and distributed by MacDonald & Co (Publishers) Ltd, Gulf House, 2 Portman Street, London, W1. Price* 30*s.*

THE surprising fact, in the very first sentence of this book, is that the line was open for only 37 years, and has already been closed for over 28, but there is today a growing interest in the line and an appreciation surmounting that displayed during its lifetime. The joint authors have produced a thoroughly complete and comprehensive story of this fascinating 1 ft 11½ in gauge system.

The railway was formed as an independent company and opened throughout in 1898. It later became part of the Southern Railway in 1923, but despite the introduction of new equipment, including one new locomotive, growing road competition brought about its downfall and the last train ran in 1935. Very little of the system was left to survive when dismantling was completed a year later.

Reasons for its closure are examined and the authors conclude that the SR tried to operate it too much like a regular standard gauge line. If more economies had been introduced, such as a seasonal service on the lines of the Vale of Rheidol, its future as a seasonal service on the lines of the Vale of Rheidol, its future as a unique scenic attraction in a popular tourist area could have been brighter. If it could have survived the war, it would have been an obvious target for the post-war amateur preservation societies.

In 134 pages of text, tables, diagrams, maps and sketches is told the story of its history from construction to dismantling, its operation, timetables, description of the route, and a thorough survey of the locomotives and rolling stock. The book is very well produced and lavishly illustrated with a fine selection of 58 photographs and one colour plate. The drawings of rolling stock and station buildings make it particularly useful for modellers.

GWR gem

GONE WITH REGRET: Recollections of the Great Western Railway, 1922-47, *by George Behrend. Published by The Lambarde Press, 95 Walton Road, Sidcup, Kent. Price* 25*s.*

EVERY GWR enthusiast will know how George Behrend felt when he wrote this book and they won't need recourse to the sub-title to realise what it is all about. There is an indescribable magic in the initial letters GWR that conjures up visions of chocolate and cream coaches, green engines, polished brass and copper, and sunny stations in Wales and the West Country. The very names of places from Fishguard to Penzance, Barmouth to Paddington, pull at the heart strings of every GWR enthusiast.

George Behrend's book does the subject full justice. There are things left unsaid—it would take a library to cover the subject completely—but anyone who knew and got to love the GWR and the territory it served will read the 190 pages with relish. It undisguisedly preaches to the converted, but there are enough of us to ensure this book a wide circulation and the success it deserves.

The photographs are superb and full of GWR atmosphere. I particularly liked the idea of referring to OXFord, BANbury, DIDcot, emphasising the old GWR engine shed codes in heavy capitals. How much better these codes were than today's meaningless jumble of digits. The geographical division of the subject matter is also an excellent idea. Chapter headings such as 'Glorious Devon and the Cornish Riviera', 'Croeso Y Gymru' and 'Smiling Somerset' are choice examples.

I had so little quarrel with anything Mr Behrend had to say in this book and recommend it wholeheartedly—but in all honesty—to GWR enthusiasts only!

Valuable reference

LOCOMOTIVES OF THE LNER—PART 7 TANK ENGINES CLASSES A5 TO H2. *Published by the Railway Correspondence & Travel Society, and available from the Hon Asst Publications Officer, 19 Dene Court Road, Olton, Solihull, Warwicks. Price* 25*s post free.*

PART 7 of the Locomotives of the LNER is the first of this ten-volume series to be published, following the recent publication of the Preliminary Survey. Part 7, describing the Tank Engine Classes A5 to H2, contains 117 pages of text, plus 79 pages bearing reproductions of no less than 209 clear and well chosen photographs, bound in stout glossy 'LNER green' paper-back covers.

The locomotives dealt with include the 4-6-2 tanks of the GC and NE, as well as the NER H1 4-4-4 tanks subsequently rebuilt by Gresley as 4-6-2s and reclassified A8; 4-4-2 tanks of the GN, GC, NB and M & GN; 4-4-0 tanks of the North British; the solitary Class E8 2-4-0 tanks of the GC, of which there were only two examples; the 2-4-2 tanks of the GC, GE, NE and Colne Valley & Halstead Rly; the 0-4-4 tanks of the GN, GC, NE, NB and GNS and, finally, the ex-Metropolitan Rly 4-4-4 tanks of Class H2. All the 931 locomotives dealt with in this Part have now been withdrawn.

Every individual class of locomotive is featured in detail, and its history and description of work performed is traced until the last surviving member. Extremely useful summary tables give easy reference to the running numbers, dates of introduction, rebuilding and withdrawal, and summary chapters give a useful guide and potted history to the classes included within each wheel arrangement. The value of this book as a source of reference is beyond question and the RC & TS deserve credit for a wonderful achievement.

The Bristol Pullman awaiting departure time at Platform 3, Paddington Station.

RAILWAY REVIEW

by Norman Simmons

BY courtesy of the Western Region of British Railways, I was recently privileged to ride in the driver's cab of the 11.45 down Bristol Pullman, one of the luxury air-conditioned multiple-unit diesel trains providing express services to and from London, Bristol, Weston-Super-Mare, South Wales and Birmingham.

On my journey to meet the train at Paddington, I saw both the up Bristol Pullman and the South Wales Pullman speed non-stop through Reading General station, and I was vastly impressed with the external appearance, the blue and white livery and the smooth streamlined shape of the trains. I was also pleased to see the interest they aroused among my fellow travellers waiting at the station. Even to the most uninitiated they are an obvious sign of progress and modernisation, and they must provide valuable publicity for British Railways along their routes.

By the time I reached Paddington, the South Wales Pullman had cleared the station for servicing. The Bristol Pullman followed shortly after, but returned again later with about 30 minutes to spare before departure time at 11.45. Passengers were beginning to roll up and Conductor Townsend was busy allocating seats to the last-minute bookings and taking the Pullman supplementary charges. There is adequate second-class accommodation offering facilities greater than that found in some first-class carriages, yet the Pullman supplements are very much cheaper than the additional cost of a first-class ticket. The accommodation offered comprises 108 first-class seats in two first-class kitchen cars and two all-first parlour cars, and 120 second-class seats in the two motor coaches and two second-class parlour cars; a total of eight cars per train.

After examining the superb comfort of the train, including such features as double-glazed windows—with an individually controlled venetian blind at each seat—and reclining arm-chair type seats, I introduced myself to the crew—driver Fred Higby and fireman George Cowley of Bristol depot, and Inspector Hancock from WR Headquarters. We settled into the cab of motor driving car number W60098 which, with the addition of myself and the Inspector as additional passengers, and a chair thoughtfully provided for my benefit, was now a little crowded.

The passenger accommodation is fully air-conditioned and I later experienced the comfort this produced on what turned out to be a hot day. With the 1,000 hp NBL/MAN diesel engine purring away immediately behind the cab bulkhead, and the cramped conditions we were experiencing, we were not so fortunate as the passengers, and I was very relieved when we received the right away and a breeze began to cool us down. Notch 2 on the ten-notch controller was selected to move us away and we glided imperceptibly out of the station. The first three notches control the current to the electric motors, the two diesel engines remaining idling at 650 revolutions per minute. Notch 1 provides $\frac{1}{3}$ electric power, notch 2 $\frac{2}{3}$ and notch 3 full power at 650 rpm. Notch 4 starts to increase the revs of the diesel engine until, at notch 10, the engine is working at the maximum 1,500 rpm.

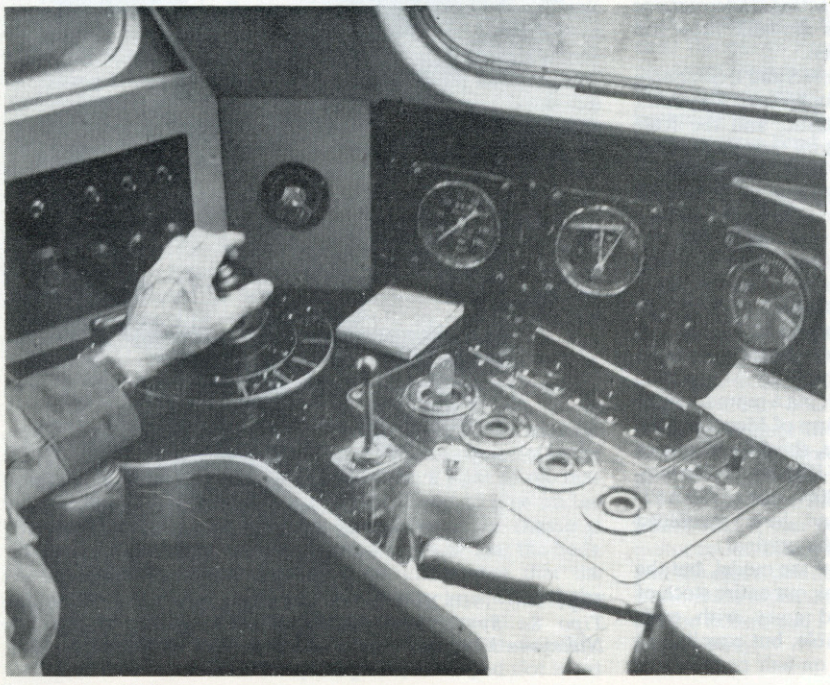
The controller was moved quickly through notches 3, 4, 7, and 9, with the driver keeping a watchful eye on the

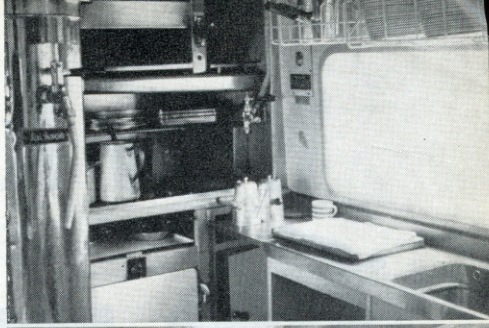
ammeter to ensure that no more current was being produced than could be consumed safely by the electric motors. By Westbourne Park, 1¼ miles from Paddington, notch 10 was engaged. We were then doing 37 mph. The build-up in speed was continuous, but by no means rapid. The riding was remarkably smooth and free from jolting. By Acton, still on notch 10, speed had reached 78 mph and a gradual build-up ensued until we reached the overall speed limit of 90 mph at Hayes, 11 miles from the start. Ninety mph does not represent the full potential of these trains, but is an overall limit set by the WR permanent way. The controller was brought back through notches 8 and 7, increased again at West Drayton, and manipulated to keep us within the 90 mph limit.

Just before Taplow, power was cut off in preparation for the first pw check at Ruscombe, nearly a mile in length, where speed had to be reduced to 20 mph. Notch 10 was engaged as soon as we were clear and, with a roar from the engine, we accelerated to a maximum of 80 mph in Sonning Cutting, before power was cut off for the stop at Reading. Smart station work saved ½ minute, but we were 4½ minutes down on our scheduled departure time. Three minutes recovery between Reading and Didcot helped to cut down the late running to 1½ minutes at Didcot, and after long stretches of effortless 90 mph running we approached Swindon two minutes early. This was to be of no avail, and a signal check slowed us to 13 mph past the factory, and to an eventual dead stand for one minute. A further signal check at Hay Lane for 1½ minutes, followed by the second pw slack to 30 mph just short of Wootton Bassett, made us 3½ minutes late again at that point. The offending train, a steam-hauled freight on the South Wales line, could be seen in the distance as we branched off on the route to Chippenham, Bath and Bristol.

It took notch 10 of the controller and the full length downhill of the 1½ mile, 1 in 100 Dauntsey bank to get us up to 90 mph again, and we were eight minutes late by the time we reached our second scheduled stop at Chippenham, notwithstanding the six minute recovery margin from Didcot. Smart station work again saved ½ minute but, despite a further ½ minute recovery margin and every effort by the driver which produced 90 mph through Box tunnel, Bath was reached eight minutes late. A 20 mph pw check immediately after leaving Bath station had little adverse effect on our departure, and normal running with a maximum of 80 mph at Keynsham and a further 4½ minute recovery margin brought us into Bristol 4½ minutes late.

The driver's control desk. The controller in the right foreground is set at notch 10 *and the speedometer is registering* 90 *mph.*





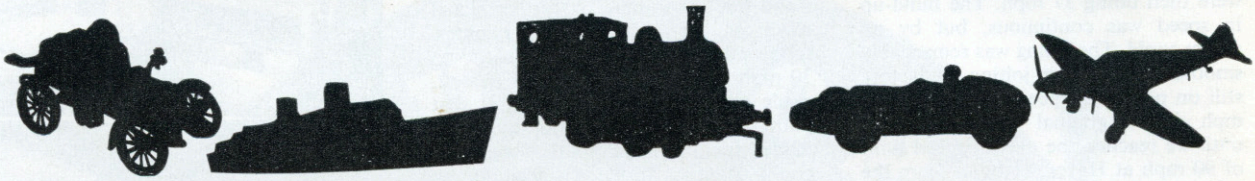
A corner of the kitchen, and the interior of one of the two first-class parlour cars.

A change of crew brought driver Forster and fireman Honney into the cab and we left Bristol just three minutes late. Within a mile, notch 10 was engaged and we passed Bedminster at 35 mph, Flax Bourton at 86 mph and Nailsea and Backwell at 90 mph where power was cut off. We held 85 mph through Yatton, and power was on notch 10 for the last time on the trip. At Puxton and Worle, power was cut off and the brakes applied for the 20 mph speed restriction at Worle Junction. We eventually came to a stand at Weston-Super-Mare at 14.14 hours, four minutes behind schedule.

The trip afforded an excellent opportunity to see how every effort is being made by the WR authorities to provide an attractive public service. The 364 ton, eight car train provides luxury service in full measure, but to keep to schedule demands every available horse-power from its two 1,000 hp engines, and the utmost effort and concentration on the part of its crew, maintenance staff and the track and signalling staff who ensure its safe passage.

Speaking for the Blue Pullmans in general, they are smart and modern to look at, beautifully decorated and fitted internally and very comfortable to ride in. Their impact on the travelling public, both on the train and along the route, was easy to see and, provided that the economics are right, it is to be hoped that this sort of service can be extended to other routes and regions.

New kits and models



NEW JAPANESE AIRCRAFT KITS

THE first two Japanese aircraft kits to come in for review have been supplied by BMW Models, and I'm pleased to report that both will be high on the list of purchases for the model maker interested in increasing the range of a 1:72 scale collection.

The aircraft, a Mitsubishi A6M2-N Rufe and a Nakajima Ki 43-1c Oscar, are made to 1:75 scale, but the variation in size when compared with available material in 1:72 scale was very small indeed and the difference will not be noticed.

Both kits are well detailed and as accurate as can be expected. I thought that the cockpit canopy of the Oscar was a little low in profile, but this is a minor point. Both canopies, in fact, are inclined to be rather heavy-handed in their finish, and are perhaps the weakest points of what otherwise are very good replicas.

The transfer sheets came in for the greatest criticism. Those for the Rufe, for example, were poor, the subjects being blurred and terribly shiny. The Rufe, however, makes up for this a little by having a transporting trolley similar to that used under operational conditions to take the floatplane from the water for servicing. This helped a great deal in the display of the model, which would otherwise be an odd man out in the collection.

Gimmickry is cut to a minimum, and where employed doesn't spoil the kit. The Oscar has a retracting undercarriage which really does work and the Rufe has movable flaps and ailerons. Both canopies are designed to open.

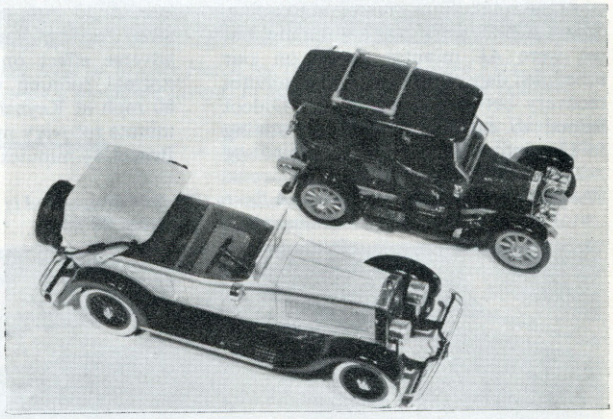
The models, which come from the Japanese S and L company, cost 6s 11d each, from BMW Models of Wimbledon. The Oscar has 36 parts, moulded in a light grey plastic, and the Rufe has 42 parts, moulded in dark green. Both are well worth buying, and I look forward to reviewing a Judy, Peggy and Jill which, according to the box lids, are still to come. *A.W.H.*

LMR ELECTRIC LOCO

POPULAR items for modellers in the electrification of the LMR route, which is steadily creeping south to Euston, are the powerful 3,300 hp Bo-Bo electric locomotives, built specially to operate the modernised service. Attractively styled and painted blue and white, they are rapidly building a reputation for speed. It is appropriate that the Liverpool firm of Meccano Ltd, at the northern-most terminus of this route, should add one of these locomotives to their extensive range of Hornby-Dublo two-rail OO gauge models. They have chosen E3002, one of the AEI-built locomotives, as their prototype and have succeeded admirably in capturing the appearance of the original.

Not only has Hornby captured the look of the model, but the performance as well. On test, our sample took our entire stock of ten Hornby-Dublo coaches, and romped away with ease. Maximum speed with this load was incredible, but equally impressive was the slow speed control; when on half power from our transistorised controller the locomotive crawled slowly and steadily at a scale walking speed. Adding additional vehicles did not seem to have the slightest effect, and I ran out of rolling stock and still didn't stall the engine!

The ring field motor certainly has a very convincing performance in this model. Power is transmitted to the rails by only one axle and one pair of wheels, but rubber tyres help give the locomotive enough grip for every normal load. I found in practice that the locomotive performed best with the power bogie furthest from the train. This must be something to do with the weight distribution, and the forces set up by the weight of the train. If you want to haul really heavy 14- or 15-coach trains, to get the best out of this locomotive in both directions you will need a turntable, but for the average modeller who is limited by



Top: *Rio* 1910-20 *Fiat Tipo* 2 *and* 1924 *Isotta Fraschini Tipo* 8*a Spyder.* **Above:** *Japanese S and L kits of the Nakajima Ki* 43-1c *Oscar and the Mitsubishi A6M2-N Rufe, from BMW Models.*

size to modest four- or five-coach trains it will have more than adequate performance without a trace of wheel slip.

The correct-type pantographs are working models, and a small plug on the top of the roof can be plugged into one of two sockets to enable the operator to choose between two-rail track or overhead catenary supply. Instructions enclosed explain it is necessary to ensure that only trailing pantographs should be used, and the trailing pantograph should be raised and the leading pantograph should be lowered whenever the locomotive is reversed. The only difficulty I found was that nowhere in the instructions could I find out how to keep a pantograph lowered. I have tried several ways, but at the time of writing this review I have still not found it self-evident how this should be done! One of the pantographs had suffered damage in transit and, although they should stand up to normal use, care should be taken when handling or operating this locomotive.

Despite any minor criticisms, I would clearly recommend this model. The price is extremely reasonable—£3 15s—and I am sure the model will have the sales success it deserves. *N.S.*

FORMULA 1 FERRARI

AUTO-MODELS LIMITED, suppliers and constructors of model cars, have recently announced three more new models. These comprise two of the latest Italian Rio die-casts and another in the Auto-Kits series of all-metal World Championship-winning Grand Prix car kits—Phil Hill's 1961 Ferrari.

The all-metal Ferrari kit features accurately shaped body, finely detailed wire-spoke wheels, springs, suspension parts, racing mirrors, steering wheel, transparent screen, transfers, etc, and joins the 1962 BRM and 1963 Lotus 25 priced at £2 9s 6d, plus 2s postage and packing.

The two superbly finished Rio imports are a 1910-20 Fiat Tipo 2, and a 1924 Isotta Fraschini Tipo 8a Spyder. Mainly die-cast, but featuring some beautifully moulded plastic parts, these miniatures include spoked wheels, headlamps, sidelights, chromed radiator surrounds and transparent screens. Both are well worth their 35s, plus 2s postage and packing. *D.C.N.*

LIGHTWEIGHT CHASSIS

THE steady increase in interest and support for slot racing has encouraged manufacturers to produce an ever-growing supply of specialist equipment for this absorbing hobby. The stage has long since been reached where the expert slot racer is closely akin to his counterpart in real life, and experiments with engine, chassis and suspension 'tuning' to such an extent that his hobby must absorb almost as much time as going real motor racing.

One of the latest, and most interesting, items of equipment to reach the market is the new lightweight Power+ chassis, designed and built especially for BMW Models, of Wimbledon, and selling for 18s 6d. Made from aluminium, undoubtedly its most significant feature is that it incorporates (for the first time on an 'over the counter' chassis) two high quality miniature ball races for the rear axle. These are beautifully made, and it is claimed that they reduce frictional power losses by an amazing degree, and thereby give a significant increase in performance. Our sample chassis arrived only just in time for us briefly to examine it before going to press with this issue, and we hope that Bert Lamkin, our model slot racing expert, will be able to give his comments next month.

The Power+ chassis, complete with rear axle, weighs a mere ¼ oz, and can be used with most 1:32 scale proprietary Grand Prix or Grand Touring car body shells now on the market, such as MRC, Supershells and Strombeker. It is designed to take VIP or Airfix steering, and K's Mk 1 or Mk 2 motors, though it is easily modified to take other power units. It is supplied boxed, complete with instructions, and a set of washers, screws, nuts and bolts with which to attach the body shell, steering and motor. For the miniature motor racer, it would seem to be a useful investment. *D.R.*

SUBURBAN COACH KIT

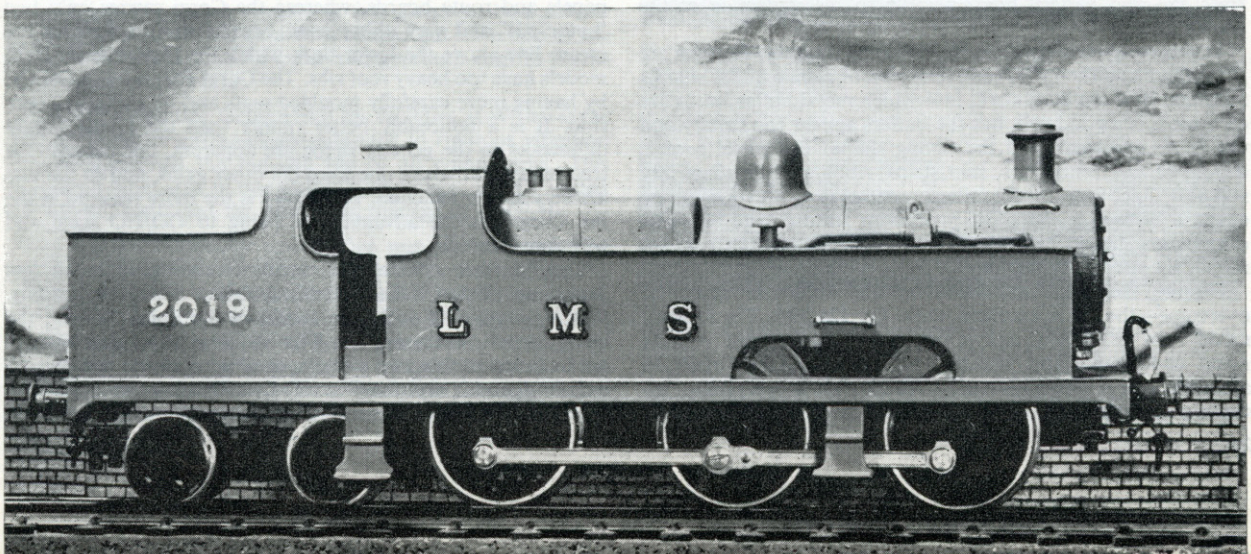
AS announced in our report (May issue) of the Easter Model Railway Exhibition, Graham Farish are introducing a new range of OO gauge passenger coaches. The announcement is timely, in view of the current shortage of coach kits, and the first in the series, a nine-compartment second-class suburban coach, will fill a long-felt want.

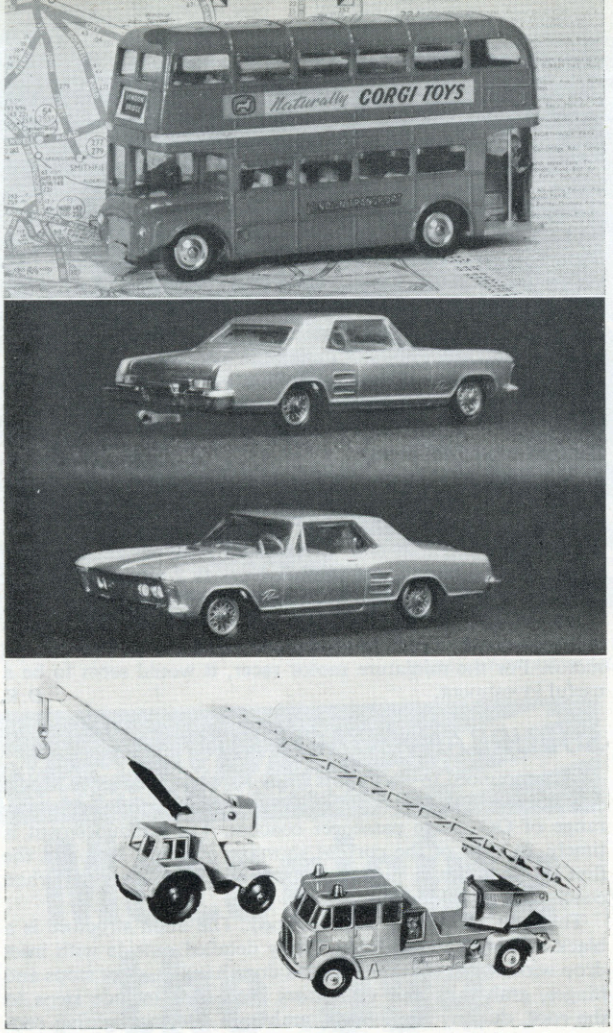
This first kit is very well designed. The main structure is a black moulded plastic body, nicely detailed outside with inset drop windows in the doors, raised door handles, door stops and hinges, grab rails and ventilators. The ends include steps to the roof, dummy lamp irons, grab rails, electric lighting connectors and brake gear. The interior seats and part partitions are also incorporated in the moulding.

The beauty of the kit is that the underframe is all-metal, and simply bolts together. The bogies are assembled from a metal casting, on to which bolts the ready-assembled Graham Farish

Continued on next page

Latest kit to appear in the Wills Finecast range is this LMS (ex-Midland) 0-6-4 tank, which costs 56s.





Top to bottom: *Corgi Toys Routemaster and Buick Riviera; and King Size Matchbox replicas of a Jumbo Crane and a Merryweather fire engine.*

New kits and models—*Continued*

coupling, and a keeper plate which holds the metal two-rail insulated wheels and axles. The bogies are bolted to a plate metal chassis, and two more bolts fix the chassis and cast metal truss rod and battery box assembly to the underside of the plastic body.

In this reviewer's opinion, the two least desirable features are the buffers and the metal roof. The idea of plastic buffer shanks moulded with the bodywork, into which metal buffer heads are cemented, is a good one, but the buffers appear too stubby and the heads too small and the wrong shape. The metal roof is devoid of any ventilators, rain strips, ribbing or detail of any sort and, since most model railways are below eye level, the bare expanse of roof is the most prominent feature, and tends to overshadow the quite considerable detail incorporated in the rest of the model.

Despite these faults—which, by the way, can easily be overcome—the kit is excellent value for 12s 10d. The finished model runs beautifully, and is very stable on the track with its metal underframe and wheels. The kit is simplicity itself to assemble and a large instruction sheet makes everything, including final painting, easy to follow. The only tools required are a small screwdriver, a pair of long-nose pliers, a small file to remove the limited amount of flash on the castings and moulding, and paints and brushes. Further items in this new Graham Farish Formoway series are expected, and eagerly awaited. *N.S.*

MINIATURE MERRYWEATHER

FEATURED among the latest Lesney releases is what is claimed to be the tallest Matchbox model yet. It is a 1:60 scale King Size series replica of a Merryweather fire engine, sporting a turntable ladder. When fully extended, the ladder is almost 12 inches tall, giving rise to the 'tallest yet' claim. Also featured are fully independent, if somewhat weak, suspension, plated turntable control console and bells, tinted cab windows, and authentic 'Kent Fire Brigade' transfers. Cast detail is very good, all the various grilles and vents and panels on this type of vehicle being carefully reproduced. The $6\frac{1}{8}$ inch long miniature Merryweather costs 6s 11d.

The second of Lesney's two latest releases is a smaller, Matchbox series, version of the King Size Jumbo Crane. With elevating and revolving jib, supported in any position by a realistic 'hydraulic' ram, and unbreakable plastic hook, the Jumbo, 3 inches long in 1:84 scale, sells for 1s 11d. *D.C.N.*

GATHERING WINTER FUEL

DINKY TOYS have just produced a further variation on their well-known Bedford TK chassis, a coal lorry.

Finished in red and silver, with blue interior trim, it is fitted with a flat platform body and twin rear wheels. With Coal Utilisation Council transfers and a lettered Hall and Co headboard, the TK looks most realistic carrying the miniature coal sacks and scales provided. The $4\frac{3}{4}$ inch long Bedford costs 8s 11d. *D.C.N.*

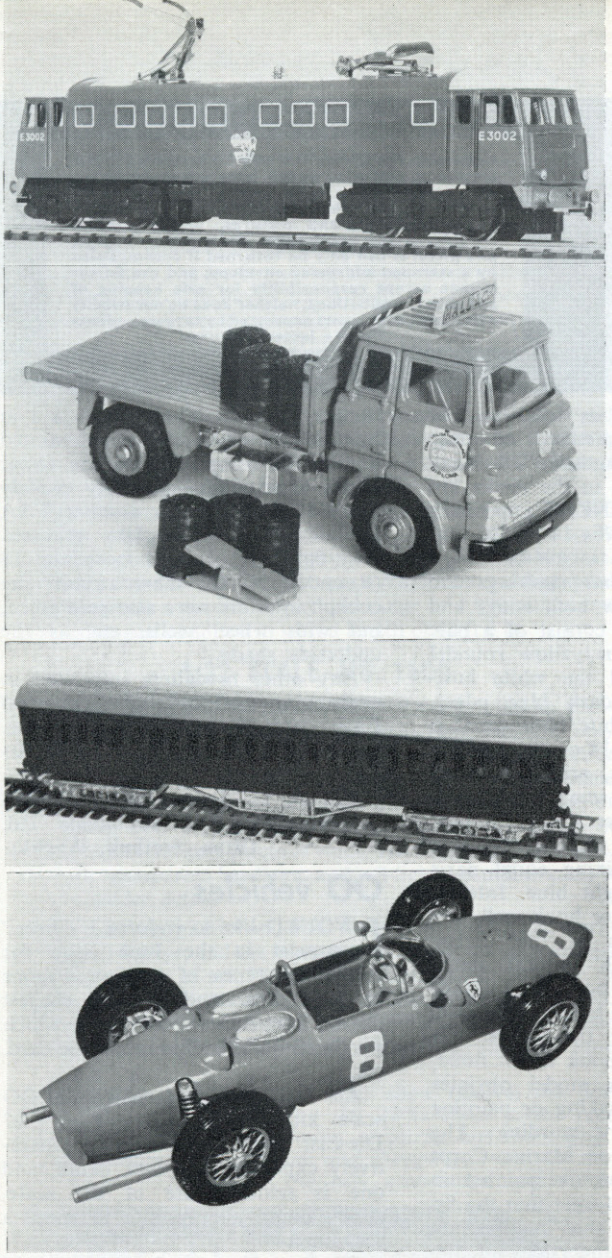
RIVAL ROUTEMASTERS

LAST month we reviewed the Dinky Toys Routemaster bus, and now Corgi Toys have produced their 64-seater version of the same vehicle.

The Corgi Routemaster, built to OO/HO scale, boasts finely detailed interior trim, a crew of two (driver and conductress), jewelled headlamps, correctly patterned ribbed floor and Glidamatic spring suspension.

With two models of the same subject being produced by two leading firms, there are obviously comparisons that can inevitably be made. The Dinky version is the bigger, yet cheaper, of the two (7s 11d as compared to the Corgi's 8s 9d) and is, in some respects, the more realistic, having authentic advertising panels and route boards, whereas the Corgi carries only two 'house-ads' and very abbreviated boards, though features the cream line above the lower deck which the Dinky lacks. Both models have too heavy roof ribs. The Corgi does score, however, by having more carefully moulded seats and by having suspension. It is a noticeably better runner than the Dinky. Slight differences in the general shape are apparent, but overall it is true to say that where one loses the other gains, and so the two are very evenly matched. The Dinky is the more realistic, while the Corgi has the advantage of being to OO/HO scale and spring-suspended.

Corgi's other release this month is something much less 'mundane' (if that is the right word) than a double-decker bus. It is a beautiful $4\frac{1}{4}$ inch long model of the Buick Riviera, the luxury American touring car. Two of Corgi Toys' best features are included in this miniature, spoked wire wheels less than $\frac{3}{8}$ inch in diameter and the Trans-O-Lite illumination system for both head- and rear-lights. With plated grille and bumpers and



Top to bottom: *Hornby-Dublo LMR Bo-Bo electric locomotive; Dinky Toys Bedford coal lorry; Graham Farish suburban coach kit; and Auto-Kits replica of Phil Hill's* 1961 *Formula* 1 *Ferrari.*

exceptionally clear windows, the Buick includes finely etched panel and louvre detail, a towing hook and very effective spring suspension, this being perhaps the best running die-cast we have ever seen. Price in the UK is 5s 6d. *D.C.N.*

SUMMER SHOW

THE 10th Model Railway and Transport Hobby Show, held at the Central Hall, Westminster, from August 11 to 15, was earlier this year than usual, but it allowed many supporters of the hobby to see the show during their summer holiday. The trade unveiled many new items and we just have space to mention a few.

Those two stalwarts of the model railway kit world, K's and Wills, produced new kits for the show. K's was an outside frame Dean Goods 0-6-0, costing £6 9s 6d, an example of which was displayed in their showcase. Bob Wills was in attendance to demonstrate the newest addition to the Wills Finecast range—the LMS (ex-Midland) 0-6-4 tank, affectionately known as 'flatirons'. The kit costs 56s and fits to a Tri-ang standard 0-6-0 chassis.

G. E. Mellor were showing their OO gauge LNWR George V 4-4-0 locomotive and tender body kit which is now available, price £3 10s, and fits to the Tri-ang L1 chassis. Another outstanding new OO gauge item from GEM was their plastic-sleepered Flexi-Trak at 5s 11d per yard. Sleepers are scale size, correctly spaced to BR standards, and points will follow later. New TT items were printed card LNWR coach sides, and followers of the 5½ mm scale narrow gauge were pleased to see the new side-tipping hopper wagon kit at 5s 10d.

The staff on the Graham Farish stand had cause to smile again at yet another Formoway track success, this time a point on the curve. A review sample is to hand and will be fully discussed in next month's New Kits and Models.

The joint W & H Models, Peco and Lone-Star stand gave a convincing demonstration of the bright future planned for the ultra miniature OOO gauge. Imported Arnold Rapido Continental rolling stock was performing beautifully on the new Peco OOO gauge Streamline track. Peco points and conversion kits for BR outline steam locos will follow shortly. (The magnificent BR model of Newhaven harbour was an example of what can be achieved in this scale.)

For the first time, Airfix were at the show, with a working Motor Racing circuit—on which could be seen all the latest items in the range—and a model railway layout designed to show off the large variety of Airfix OO/HO construction kits. Pictures of these layouts appear on page 5 this month. *N.S.*

FREE CRUISE

IN our June issue, we made reference to a competition being run by Revell, with a sunshine cruise for a family of four in the P & O luxury liner, *Oriana*, as the star prize. Lucky winner of the nine-day cruise was Mr A. L. Punchard, of St Austell, Cornwall, who recently sailed on the liner with his family. There were also 50 consolation prizes of the Revell motorised *Oriana* kit. *D.R.*

NEWS FROM IPMS

THE London branch of the International Plastic Modellers' Society held another successful meeting on Friday, July 31, at the Porcupine. It would seem that many members were prevented from bringing along models on this occasion, as there were considerably fewer than usual on display. However, the usual discussion groups got together to talk over their own aspects of the hobby, and several new members were gained. Next meeting is on Friday, August 28.

Since my last report, we have heard from members in Yorkshire and Co Durham that they held their first joint meeting on June 27, and that all members in the area were present. The meeting was a great success, and it was decided to hold a regular monthly meeting in future. Dates and a venue will be notified in this column as soon as possible.

From farther afield we have also received a report of a very successful meeting and exhibition held by our Czechoslovak members in Prague. The exhibition, in particular, went over very well and was visited by thousands of people.

To end on an apologetic note, Mr. Baxter who, as mentioned in this column last month, was due to give a talk on model finishing at the Porcupine meeting on July 31, was unable to attend for service reasons. We now hope to fit this event in at a future meeting.—*R.R.W.*

Letters to the Editor

Letters to the Editor can only be answered in the magazine. Readers whose letters are published each receive a free Airfix plastic construction kit of their choice. We are always pleased to receive your comments and pictures, which will be considered for publication. Submitted material and pictures can only be returned if accompanied by a stamped addressed envelope, and the Editor cannot accept responsibility for safe keeping of any such contributions, neither does he necessarily agree with comments expressed by correspondents in the letters column.

To be, or not to be?

IT seems to me that a gross injustice has been allowed to escape the attention of Airfix and the readers of AIRFIX MAGAZINE. After offering such famous and infamous individuals as Julius Caesar, Joan of Arc, Cromwell, and Napoleon in the historical figures series, those responsible have completely ignored a writer of some talent and fame, William Shakespeare. And on the Bard's 400th birthday too. For shame. Could it be that, perhaps, Airfix is in the unscrupulous hands of Bacon's followers?

I completely agree with Mr McMorran (June issue) who suggests models of the Beatles. But lest we should offend other Liverpool factions, models of the Dave Clark Five are a must. One solution could be to allow either Mr Hall or Mr Ellis to try their hand at kit conversions with the Beatle models. From Ringo to Dave in five easy steps? From there the possibilities are limitless. One could even attempt converting them to the Rolling Stones, if one had the skill for it, as well as the stomach.

Dennis Staszak, Detroit, Michigan, USA.

Thank you for your entertaining comments, Mr Staszak. But to avoid our editorial postbag reaching even greater proportions, we must point out that the famous Dave Clark Five come from London's Tottenham, which makes a refreshing change from Liverpool.—Ed.

Corsair finishes

CONGRATULATIONS on yet another superb issue — that of August—and in particular to Mike Bowyer for his Corsair article, which was both interesting and accurate, for surprisingly little is really available about this aircraft in service with the FAA.

Being an avid modeller of naval aircraft, perhaps other readers may be interested in a few more details as to finishes, etc, as follows: The RNZAF variant, pictured on page 387, is in the standard US Navy colours as included in the Airfix kit. (Units of the RNZAF operating Corsairs included Nos 14 to 20, converting from P 40s in 1944.)

The New Zealand markings are carried above/below both wings and fuselage sides, and consist of a pale blue/white/pale blue/yellow roundel to which is added the white horizontal bars with dark blue edges. Fin stripe is red/white/blue, serial is black, the numbers 18 on the cowling and fin, both sides, are also white, but are repeated in small black digits on the front undercarriage covers. Cockpit interior is an anti-corrosive green, made by mixing equal parts matt yellow and light blue. Interior of wheel and arrester hook wells are 'insignia white'—as is the undercarriage gear, with natural metal wheel centres. Prop boss is the darker of the upper surface blues; black prop blades with yellow tips. Note that the actual arrester hook is not fitted, and of course this model obviates the tricky job of making or painting in the 'Royal Navy' wording: The original US Navy or Marine Corps Buaer No has been overpainted in the field, but don't forget that the fin and rudder is also the 'intermediate blue', as are the undersides of the outer (folding) wing panels. Corsair deliveries to the RNZAF consisted of both fixed and folding wing types.

Regarding Mr John A. Evans' letter—August issue again—I would respectfully point out that the serial of the Corsair he gives, JT 129, should surely read JT 126, but perhaps this was a printer's error (No! —Ed.) In any case, if this particular Corsair is modelled one will have to modify the Airfix kit canopy to that of the early F4U-1, with rear vision panels added aft of the existing canopy, also omitting the rear fuselage aerial, etc. A simpler FAA F4U-1A would be JT 259, which is serialled and also carries the words 'Royal Navy' in black; serial is 8 in high, wording 6 in. A crudely painted number '259' appears on the lower engine cowl sides—definitely crudely painted! JT 487 was another FAA aircraft finished in slate grey/sea grey/light grey, coded in white T8 (Roundel) N. On these aircraft the cockpit interiors were also pale green, but with wheel wells, etc, as the underside shade.

Any other modellers interested in exchanging information, etc, on FAA aircraft, please contact me. Looking forward to more naval aircraft in kit form.

Robert C. Jones, Editor, IPMS Newsletter, 41 Brookvale Rd, Olton, Solihull, Warwks.

OO vehicles

I WOULD like to endorse J. Cheers' request in the June issue for commoner types of railway wagons in kit form, and further suggest chassis kits, say two for 2s, on which we could build bodies of plastic card, etc.

Also, why not road vehicles in OO scale kits — buses, taxis, cars, etc? Die-cast metal ones are comparatively expensive and lack detail, and one is seldom sure of the scale. Airfix could supply kits to meet a real need.

Finally, a request for what would be a boon to all modellers in OO or 1:72 scale — sets of windows and door-frames in British style at Airfix prices.

D. J. Hutchings, London, E9.

Points of view

I WOULD like to make the following points regarding recent issues of your magazine.

In the April issue Alan Hall stated that the Victor was painted green and brown. In the July issue he says that a grey and green Valiant was on display at North Weald. I would point out that the second colours are correct for all V-bombers, and are

the same shades as used for Hunter and Javelin aircraft. Two further points, the painting of the roundel on the port wing only is standard, also the airframe number is more commonly in black, not white as was shown on XL 513 (April).

I fail to see the point that Mr Blacklock is trying to make (July issue), as of the 14 aircraft he mentions, only five are of local design and manufacture, and these are the only ones I would regard as being representative of a country. The others are licence built, but were most certainly not designed by the countries concerned. I would go further and point out that of Airfix's present range, the Wellington belonged to a New Zealand squadron, the Lancaster to an Australian, the Spitfire is that used by Johnny Johnson when leading a Canadian Wing, and the Harvard belonged to the RCAF.

I agree wholeheartedly with Mr Retford in the same issue, but think that an alternative to his suggestion would be a set of WW 2 British Infantry, as in my opinion the present Infantry Combat Group is too indeterminate in nationality.

Surely Mr Ellis (July issue), has mounted his cab tilt too high on the conversion of the Quad—I lowered mine slightly and find that it resembles the prototype photograph to a much greater degree.

Last, but definitely not least, I would like to say how much both I and my two sons enjoy your magazine. I hope that you may grow as the years pass, and prove to the denigrators of plastic modelling how wrong they are to call it a passing interest, though please, no plastic Beatles (or any other kind, for that matter).

Ronald Fallon, Tattershall, Lincoln.

'Flaming Coffin'

AS a keen modeller, mainly of World War 2 aeroplanes, I would like to thank Airfix for the recent additions of the He 111, Fortress, Corsair, B 24 and Ju 88.

Airfix kits are easily the best on the market for their price. Therefore I think it is a little unfair for Mr P. Marsh (August issue) to state that certain kits are no longer of such high quality. When completed and fully painted, these models are still extremely good and accurate. Also, to my mind, no kits should be deleted. The only kit I would not buy is the DH Heron, and someone must be buying it, otherwise it would have been deleted!

Also in the August issue, Mr R. J. Tillotson asks for the 'formidable' Heinkel Greif. Formidable maybe, but does Mr Tillotson know that the first prototype had engine trouble, the second and fourth broke up in the air, that the fifth's engines caught fire and crashed, and that similar episodes caused it to be called the 'Flaming Coffin'. Fritz Wendel rated it as the Luftwaffe's greatest failure.

Finally, I know it is not much good suggesting, so I just hope for the Heinkel 115, 219, Henschel 129, an Italian 'plane (Macchi C 202 or 205) and some Japanese aeroplanes. I have been praying for a long time, so far in vain, for a Focke-Wulf FW 200 Condor.

B. Coates, Romford, Essex.

More 'wants'

I AGREE with Mr James McMorran who, in the June issue of AIRFIX MAGAZINE, suggested the models of the Beatles. They could be made to 1:12 scale, as in the scale figures series. To include four figures in the list would mean more than 2s, but if the price is £1 people will also buy it.

To follow up the motorisation lists mentioned also in the June issue, let's have another Jaguar in the family, a 2.4 or 'S' type. These models would surely be popular, and also models of the Triumph TR4, the Triumph Spitfire, the Lotus Elite and the Chevy Corvette.

In the aircraft series, let's have more helicopters, the Wessex series or the Wasps, and also modern aircraft such as the Saab Draken, the F-100 Super-Sabre, Folland Gnat, Gloster Javelin, McDonnell Voodoo, A-5C Vigilante, Sea Vixen, Entendard IVM, F-86 Sabre, McDonnell F-4B Phantom II, Convair F-106, Delta Dart, F-105D Thunderchief, Chance Vought Crusader F8U-2, English Electric Canberra and a Handley Page Herald, and in the Malaysian Air Force markings, please—and do not think that just because I am a Malaysian I prefer Malaysian markings. If my letter does not win a prize, it perhaps can keep the Airfix designers busy for quite a while!

Finally, I think the AIRFIX MAGAZINE is superb, especially the articles concerning slot-racing and aircraft conversions.

Shah Harun, Pahang, Malaysia.

Yak conversion

I THOUGHT you might be interested in my conversion of the Yak 90 to a Yak 3.

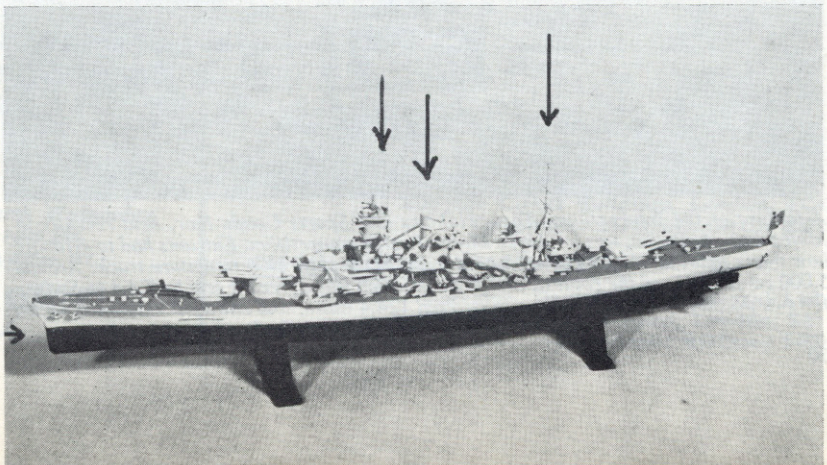
Firstly, the radiator and oil-cooler are removed. The hole under the nose is plugged with balsa wood and sanded smooth. A new radiator is carved from wood. This is positioned further aft than on the original kit. The Yak 3 had its oil-coolers in the wing-roots, and these must be made out of wood. The Yak 3 had two machine-guns and a trough must be cut in the starboard side of the nose. There is no radio antenna aft of the cockpit.

Measurements and the colour scheme for the model can be found in 'Famous Fighters of the Second World War, Second Series.' I hope this conversion proves interesting to your readers.

For future model subjects may I suggest an He 177, Fw 200, Stirling, Hampden, Blenheim, Avenger, Barracuda, Hellcat and Airacobra. Also,

Continued on next page

David L. Jones of Potchefstroom, Transvaal, sent us this picture of his Airfix Scharnhorst *model, incorporating the wartime alterations* (arrowed, above and left) *mentioned in a reader's letter published in our June issue. This should help other modellers undertaking the same task.*



Letters to the Editor

Continued

why not some models of World War 1 and pre-war aircraft? On the naval side, how about a Hunt class and J class destroyer, R class battleship, *Ark Royal*, and *Courageous*, and a frigate? May I also remind you that in the four or five years Airfix have produced ship models there is still only one cruiser in the range. Enough said?

R. W. A. Green, Merstham, Surrey.

Crikey!

ALTHOUGH I usually accept Mike Bowyer's words without question, I must challenge his explanation of the nickname 'Crikey' applied to the Whirlwind (July issue, page 354). The name came from the Shell petrol adverts just before the war. Those old enough will remember the people and animals with two heads facing opposite directions and saying, 'Crikey! That's Shell that was.' The speed of the Whirlwind and its unusual shape fitted the spirit of the adverts perfectly.

M. P. Marsh, Newport, Mon.

German two-seaters

ALL the modellers who have asked for a kit for the Ju 88 will no doubt be delighted with the latest Airfix issue, and good modelling to them.

Now, is there any chance of the few surviving WW1 enthusiasts getting something to make us happy?

Some German two-seaters for example. After all, Airfix were responsible for re-awakening the modelling urge in us with their early issues. I think that 1:72 scale is ideal for a collection, provided that you issue something for us to collect!

Jeffrey M. Smith, Hull, Yorks.

Shut up!

TO all those who wanted the Junkers Flugezeug und Motorenwerke AG Ju 88 I say: You've got it, and now shut up and let us have some peace.

Timothy Hudson, Lincoln.

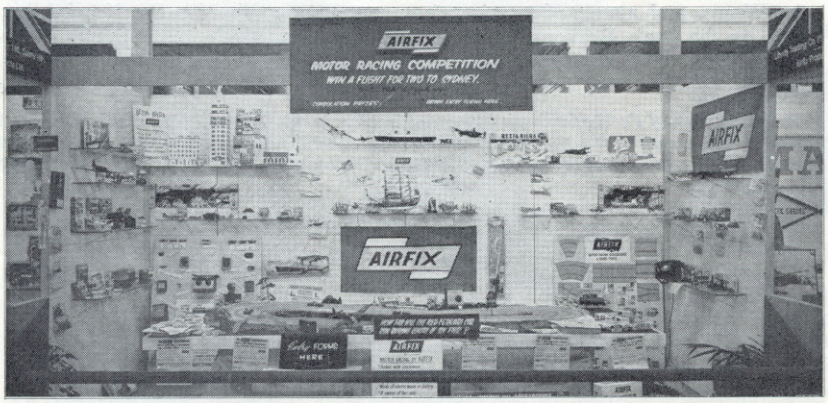
Period ships

I AM very pleased to see that my letter (June issue) about the *Royal Sovereign* has evoked at least one reply; it makes a change from comments on aircraft and railway kits.

I think that if Mr Rawlings (letters, August) cares to refer to the box lid of the Airfix *Royal Sovereign* kit, he will see that there are three sets of gammoning shown, and she has woolding on all three masts. I do agree that they should go into slits in the beakhead, but like himself, I was compromising for simplicity. In addition, I would draw his attention to the Science Museum's booklet 'Ship Models', in which he will find photos of HMS *Prince*, a ship designed by the same man, Phineas Pett; these support both Airfix and myself.

I do trust that we shall hear more from other modellers of period ships. It is a subject which has been rather neglected in your magazine yet, I think, has a fairly wide interest.

Ronald Cowling, Bramley, Leeds.



A feature of the International Toys, Hobbies and Sports Goods Fair, held recently in Melbourne, Australia, was an Airfix Motor Racing competition. Entrants had to estimate how many miles an Airfix Ferrari would travel in six days on a miniature track. Around 5,000 *people entered the contest, first prize in which was a free air trip by TAA to Sydney for two people. The Ferrari actually covered* 124.4 *miles, and entrants' estimates varied between* 3½ *miles and* 35,281 *miles!*

Suitable companion

COULD Airfix please produce a model of HMS *Eagle* in her new modernised form. This would be a suitable companion for HMS *Victorious* in the modern range, together with replicas of Sea Vixen, Buccaneer and Wessex aircraft as supporting air complement. I'm sure that this would be appreciated by many modellers.

Also I'm sure that Airfix could produce a long-awaited model of a modern frigate in a very short time. This would be appreciated by many of us.

In future models Airfix could use Mr Scicluna's suggestion (February issue) of a multi-transfer sheet of pennant numbers for flotilla modelling.

D. Cheetham, Derby.

Nylon 'canvas'

I HAVE just finished building the conversion from the Quad to the Morris truck, as described in your July issue.

I tried in vain to represent the canvas satisfactorily until I remembered seeing in a previous article how camouflage nets can be made from 'used' nylon stockings. My problem was solved. I stuck the stocking to ordinary note paper and made the truck back from it, and I must say it looks most realistic. I hope this tip may be of use to other modellers.

In closing may I say that I find Mr Ellis's articles very good? Perhaps we could have a General Grant tank in the near future?

A. Leader Cramer, London, N6.

WW1 soldiers

HAVING just looked through my August issue of *Airfix Magazine* for the umpteenth time, my gaze came to rest on a letter concerning a German Infantry Support Group. I think that it would be a good thing to go with the German Infantry.

I would also like to put a few suggestions in the suggestion box. How about some OO/HO scale soldiers of World War 1? We could have some Germans with spiked helmets,

or some British soldiers with gas masks.

One good thing leads to another, so then we would need some WW1 tanks. Also, I should like to see some Japanese tanks of World War 2, and some more German armoured vehicles, because at the moment we have only three tanks.

Then last but not least, the German ship *Gneisenau* to accompany the *Scharnhorst*.

And plastic Beatles, 'No, No, No!'

Matthew C. Watkinson, Scarborough, Yorks.

Tale of a tail, part two

I MUST apologise for not answering Mr J. E. Ward's letter sooner (April issue) but circumstances have been against it. Let us tackle the second and easiest bone first. Unfortunately this is my mistake, for I was led to believe by the way Mr Ward wrote in his first letter that he was telling readers that the night-fighting Me 262 had a new and larger tail to that of the production fighter. Hence my outburst. The tails of the two aircraft are identical in shape and size, but the tail of the Airfix model is incorrectly shaped. I think this summarises what Mr Ward and I have been trying to say. However, I would point out that the model's vertical tail is correct in height but slightly incorrect in shape, while the horizontal tailplane is incorrect.

Having devoured the meat from the first bone, let us proceed to graunch on the second. I have checked the references Mr Ward quoted, and have found that it is written but not photographic. Re-check, please, that photograph on the outer fold of the plan, the one I presume he referred to, and you will find that the angle of the propellor blades indicates four not three blades as he suggests. I had a friend of mine, who is also a model aircraft enthusiast, re-check this photograph and he, without knowing of my decision, held that it was a four-bladed airscrew. Both AFP and Jane's agree that the Dornier 217 N had two DB603A 12 cylinder liquid-cooled inverted vee motors with three or four blade constant-speed airscrews. It is possible that the prototypes had three-blade airscrews, subsequent machines changing to four-blade.

I urge intending modellers of this aircraft to study Anthony Rogers' article in the July 1961 issue of AIRFIX MAGAZINE, and give up any hope of using the three-blade airscrews, unless they have good photographs proving beyond all doubt their existence. Perhaps Mr Bowyer could clarify this problem for us, and I would also be very interested to hear from anybody else who could throw extra light on this problem.

L. D. Jones, Christchurch, New Zealand.

Pen-friends wanted

READER R. O'Connor (16¾) would like to contact other modellers, aged 15 to 18, with a view to forming a military and aircraft model club. He lives at 63 Court Road, Caterham, Surrey. Carmelo Micallej, of 58 Brored Str, B'Kara, Malta, GC, would like an American or English pen-friend aged 15, who is interested in WW 2 aircraft and ship kits, and also pictures of aircraft.

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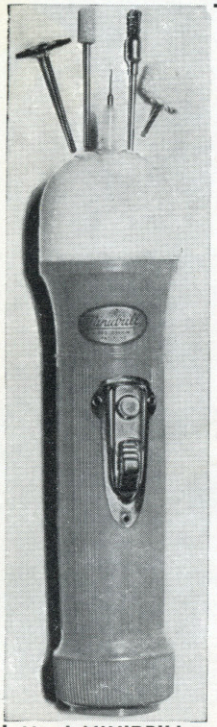

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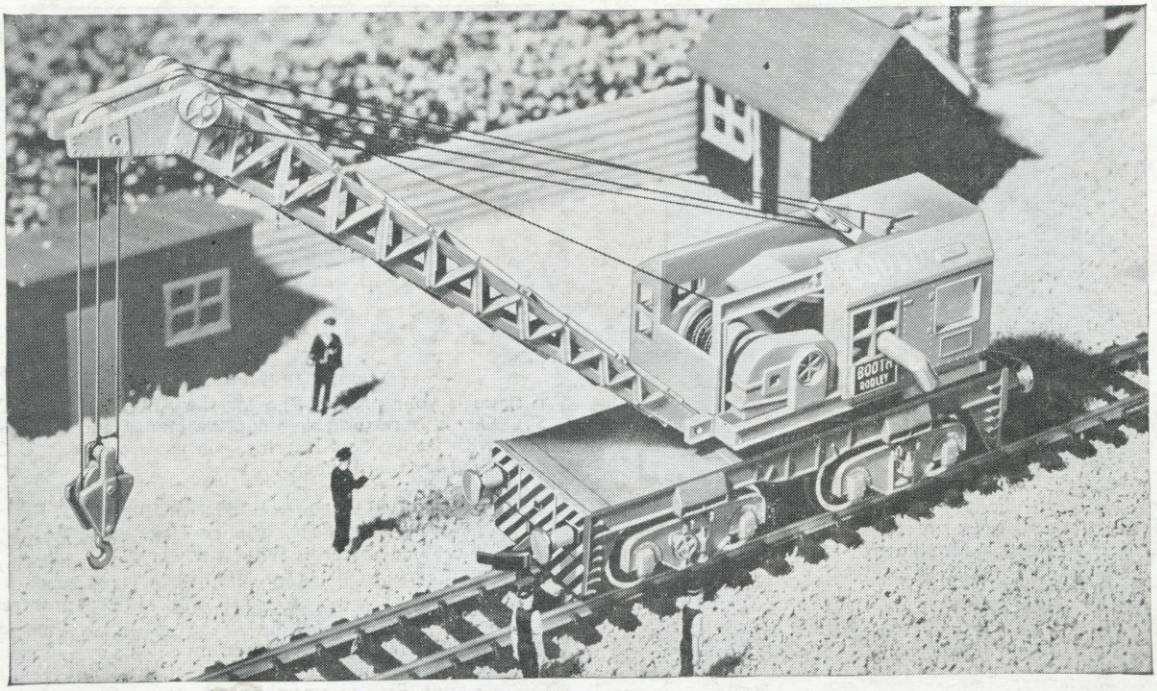

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